ISSN 2094-7283

SEAAIR
SOUTH EAST ASIAN ASSOCIATION FOR INSTITUTIONAL RESEARCH

10th Annual South East Asian Association for Institutional Research

REFEREED CONFERENCE PROCEEDINGS

Towards Global-ASEAN Institutional Research Strategic Alliances

De La Salle University
DASMARIÑAS



October 19-21, 2010
Summit Ridge Hotel & Promenade
Tagaytay City, Philippines

www.seaairweb.info

10th Annual SEAAIR 2010 Conference

Refereed Conference Proceedings

Towards Global-ASEAN Institutional Research Strategic Alliances

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Published by:
De La Salle University-Dasmariñas
Dasmariñas City, Philippines

ISSN: 2094-7283

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EDITOR'S NOTES

These proceedings represent the 10th Annual Conference of the Southeast Asian Association of Institutional Research (SEAAIR) held on October 19-21, 2010 at the Summit Ridge Hotel, Tagaytay City, Philippines. The papers presented in this year's proceedings are anchored from the main theme *"Towards Global-ASEAN Institutional Research Strategic Alliances"*. The 10th Annual SEAAIR Refereed Conference Proceedings serve as a compilation or a repository of interdisciplinary researches with wide-angle vision—they illustrate a wide range of issues under five tracks. Researches published here are fresh and current and these proceedings signify the talking shop of the SEAAIR. Its articles have an academic structure that is typical of a scholarly journal. Through this, we are like working closely together and discussing and exchanging ideas and articles.

We have unparalleled expertise in several higher education institutions and varied experiences in best practices-based institutional governance across the globe. A diverse range of people has responded positively and contributed to these proceedings. In keeping with the tradition, not all papers presented to the conference are published in the proceedings. After a careful and rigorous review by the screening committee, some papers were accepted both for presentation and for publication in the refereed proceedings. These proceedings included 49 full papers from the Philippines, Indonesia, Thailand, and Malaysia. These papers are designed to contribute to an understanding of the significance of institutional researches and to discuss their implications for academic sustainability and competitiveness.

In the editing process, we put more emphasis on fluidity and the format of the papers so as to assure the proceedings a consistent look. The technical aspects and the substance of the content are still the full responsibility of the authors and reviewers.

We owe a great deal to those who shared their ideas, energy, time, and scholarly work to the success of this conference and to the publication of these proceedings. First, to the authors who submitted their papers; second, to the SEAAIR committee who evaluated the papers published herein; and third to the local organizing committee from De La Salle University-Dasmarinas who were instrumental in the organization and success of both this conference and the production of these proceedings.

We hope that the proceedings will enhance international cooperation in the field of institutional research. We view participants' commitment as critical to the process of demonstrating their impact on the research, teaching, and learning process. One of our primary goals has been to nurture institutional research community that serves as a catalyst in evaluating and measuring their contributions to the broader organization. It is also hoped that this will help improve institutional effectiveness and institute meaningful measures to make the most strategic impact on the institution, through research initiatives.

ALICE T. VALERIO, Ph.D.
Proceedings Editor

SEAAIR
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De La Salle University
DASMARIÑAS

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Strengthening Strategic Alliances for Academic Sustainability and Competitiveness

DEVELOPING A HEALTHY UNIVERSITY MODEL IN DE LA SALLE UNIVERSITY – DASMARIÑAS

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ABSTRACT

This study generally aimed to assess the prevalence of non communicable diseases and its risk factors like physical inactivity, unhealthy diet, tobacco use, alcohol abuse and substance abuse among the stakeholders of the university namely; students, faculty, staff, alumni, administrators and parents. It also established the data related to their demographic profile, built-in environment, medical issues, and others. Survey was used to gather the said data.

The results generally presents that majority of the participants find the university environment friendly. Most of them described their attitude and mood as happy and optimistic. However, others feel stressed and pressured. Several exercises are practiced but among them, walking is the most traditionally done. Eating vegetable and fruits is in the consciousness of the participants. Nevertheless, the participants honestly admitted that they are fond of eating at fast food chains and eating sweets and chips. The stakeholders still believe that the best role of the school in promoting a healthy lifestyle is still educating. After education is the actual practice and later on the evaluation. The aspiration is to improve their health habits and practices, especially on the areas of healthy eating habit, proper stress management, and maintaining a healthy and friendly environment.

Keywords: Non communicable disease, healthy university, risk factor, university stakeholders

INTRODUCTION

World Health Organization (WHO) covers different health issues including non communicable diseases (NCDs) which according to studies are leading causes of deaths in all parts of the world. It is estimated that by 2020, noncommunicable diseases (NCD) will be one of the global burdens. World Health Organization cluster of NCDs include cardiovascular diseases, cancer, diabetes, mental illness and injuries. It also comprises of diseases that do not have infectious agents that make them spread from one person to another. Most of these diseases are linked to common risk factors such as tobacco use, alcohol abuse, unhealthy diet, physical inactivity, and environment carcinogens.

World Health Organization, together with other institutions, opted to advocate and implement health promotion at the different levels of the society through sequential processes of gathering comparable and sustainable NCD risk factor information known as STEPWISE approach. This process is based on collection of standardized data from representative populations of specified sample size to ensure comparability over time and across locations. It is said that such health promotion and scheme to improve the quality of life and achieve holistic health have entered even schools, colleges, and universities. The

academe is considered as one of the most effective venues in promoting health to prevent and eliminate NCD as well as its risk factors. In the Philippines, the healthy settings approach started when former President Fidel V Ramos signed Administrative Order No. 341 known as Philippine Health Promotion Program (PHPPs) on June 11, 1997.

It is believed that the school can be an avenue to promote healthy lifestyle. Further, the members of the university have the capacity to constantly work together to provide positive experiences and strengthen structures that promote and protect their health. Thus, they committed themselves to take the lead in the promotion of healthy university at De La Salle University-Dasmariñas.

It is the aim of this study to assess the prevalence of NCD and its risk factors among the stakeholders of De La Salle University-Dasmariñas (DLSU-D). It also seeks to develop a plan of action that will help the stakeholders - students, faculty, staff, parents and alumni - to establish a healthy lifestyle and healthy behaviour thereby making the institution a model of healthy university where the interrelationships between the physical, mental, social, and environmental aspects of health are upheld. More specifically, this research aimed to answer the following questions:

1. What is the demographic profile of the stakeholders in terms of age, sex, economic status, health condition and built environment?
2. What are the common NCDs and the risk factors among the stakeholders?
3. What are the implications of these diseases and risk factors to the lifestyle and behaviour of the stakeholders?
4. What is the accessibility level to the health services of the stakeholders?
5. What is the role of DLSU-D to the healthy lifestyle of the stakeholders?

To establish the baseline data that would serve as the bases for the plans and programs that will promote healthy lifestyle, a survey was conducted with few of the university stakeholders. This was randomly done in the university. A questionnaire was used to assess the most common risk factors such as physical inactivity, unhealthy diet, tobacco use, alcohol abuse, and the use of other substance abuse. In general, the study identified the prevalent NCDs and its risk factors among stakeholders. Likewise, it includes the major variables like demographic profile, built-in environment, medical issues, and others.

For its framework, the study adopted the STEPWISE approach of WHO where the following step by step procedure and processes were involved: (a) Planning for the estimation of population needed and advocating for action; (b) Planning for the formulation and adaptation of policy; and (c) Planning for identification of policy implementation steps, which is a population-wide intervention. Likewise, this also embraced the framework of the Philippine Health Promotion Program Through Healthy Places (PHPP) which was adopted through Administrative Order 341. This program establishes that the school is one of the healthy settings where healthy lifestyle may be promoted.

RESULTS AND DISCUSSION

This chapter presents the findings, analysis and interpretation of data gathered regarding the study on Establishing a Healthy University Model in De La Salle University-Dasmariñas.

The total number of respondents who were involved in the survey concerning the healthy lifestyle and behaviour was 642. Of this, 570 were students. The rest of the stakeholders, namely; teachers had 29 participants, staff 22, and alumni 21.

About 39 percent of the participants are male while 57 percent are female. Based on the results of the study, most of the participants opt to stay in the classrooms, canteens or the waiting sheds. This supports the argument that since the student spends most of their time inside the university, then these classrooms can be one of the most effective venues in promoting health to prevent NCDs as well as the risk factors; and those whom they shall encounter in the classroom may be the forerunners of healthy lifestyle.

From the total number of 642, 52 percent of the participants considered the school as very good in terms of being a healthy and environment friendly place to spend most of their time. A good rating had been given by 39 percent of the participants. A high favourable percentage can be attributed to the fact that De La Salle University has maintained its goal to keep the university a smoke free zone and was awarded as a "Dark Green School" by the Environmental Education Network of the Philippines.

Health condition Table 1 shows the body mass index and blood pressure verbal description of the respondents. Although statistics show that most of the respondents (46%) have normal body mass index, it should be noted that the combine percentage of underweight (22%), overweight (10%), and obese 1 and 2 (17%) accounts for 54 percent of all the respondents. This means that there are more respondents who are not within their normal weight range. It is interesting to note that a number of students are also overweight, obese, prehypertensive and hypertensive. At their age, their present lifestyle would be a very big factor for NCDs. Likewise, the data under blood pressure verbal description illustrates that most of the participants have normal blood pressure. However, 14 percent and 11 percent are pre hypertensive and hypertensive, respectively. The scenario of having a quarter of the respondents with elevated blood pressure is not surprising with 37 percent of the respondents having problems with their weight.

Table 1
Body Mass Index and Blood Pressure of Stakeholders

	Students	Teachers	Staff	Alumni	Total	Percentage (%)
Body mass index						
Underweight	134	2	2	3	141	22
Normal	273	12	5	6	296	46
Overweight	52	2	7	6	67	10
Obese1	78	10	6	5	99	15
Obese2	10	3	2	1	16	2
Blood pressure						
Normal	432	9	6	10	457	71
Pre hypertensive	64	13	9	6	92	14
Hypertensive	49	7	7	5	68	11

These results allow the community to realize that the annual and regular medical check up of the stakeholders is a positive move towards maintaining a healthy lifestyle. In this manner, promotion to have a healthy lifestyle and behaviour need to be strengthened.

Of the 642 respondents, 60 percent and 27 percent of the respondents observed that they have good and very good health condition respectively.

This positive self-rating on health condition is a good starting point to advocate healthy lifestyle and behavior with the respondents. The respondents knew the benefits of being healthy-free from NCDs and risk factors. It is interesting to note that eight percent of the participants had no answer for the self-rating. This could account for the participants having not aware of their current health condition. The results appear to show participants with high percentage of self-rating as having good healthy lifestyles. Many of

the respondents were found to be overweight and obese and are prehypertensive, however, they still believe that they are healthy which maybe the reason why many still persist with their present unhealthy lifestyle.

The study also shows the usual activities of the respondents to keep themselves healthy. It was revealed that 27 percent of the respondents eat healthy food. This is followed by 22 percent who avoid tobacco or cigarette and alcohol. Vitamin intake and exercise are activities that are done by 19 percent of the respondents. A small number (18%) do exercises and (6%) avoid any form of prohibited drugs. The results show that the respondents are aware of different means to keep themselves healthy. Many among them may be exercising healthy habits and lifestyles, however, proper information and education regarding the factors in this area should still be done. Among the vital information that they should know are the appropriate exercises where they can maximize its benefits, and the healthy foods as well as the proper vitamins they are to take.

Majority (53%) of the participants think that they are in good health condition which gives them no reason for a regular check-up. A large percentage (43%) undergoes their regular annual physical examination as required by the school. Majority of the students do not have regular check-ups and this is something that should be addressed.

Part of the risk factors in NCDs is the history of NCD in the family that includes the parents and first degree relatives. This is a big factor to be considered since first degree relatives with history of NCDs poses a higher risk to the person. Results show that most of the respondents from the four sectors have a history of diabetes and hypertension.

Asthma is seen as the leading disease among 45 percent of the participants with present medical condition. Obesity ranks second with 27 percent. Among the cluster of NCDs, the two mentioned medical condition fall under chronic respiratory disease and unhealthy diet and/or physical inactivity. There is only a small percentage of the respondents suffering from other medical conditions like cardiovascular disease and diabetes but despite of the low percentage, the presence of risk factors should not be taken lightly.

Only fifteen percent of the total participants are smokers. Their cigarette intakes range from 1 to 10 sticks per day. Seventy two percent of the smokers revealed that they started smoking at the age of sixteen to twenty years old. This activity was learned from peers. On the other hand, 48 percent of the participants revealed that they are affected by second hand smoke. Their exposure is accounted for in the public transportation and university smokers with 48 percent and 26 percent respectively. It is interesting to note that in a non smoking school like DLSU-D can be a place of exposure to cigarettes for 26 percent of the participants. Exposure here probably means exposure to smokers outside the university when the students go out to eat at the establishments in front of the school.

Majority of the participants (86%) revealed that they drink alcoholic beverages only on specific occasions. Of those that responded, five and three percent take alcohol beverage once and twice a week respectively. Of the total participants, 369 students drink alcoholic beverage. Though it may be considered normal for the age group, from a health perspective, it is alarming even if it is just on specific occasions. Proper information should be given to them on the harm and danger alcohol poses.

Most of the respondents or 73 percent of the participants classify their mood and attitude most of the time as happy and optimistic while 14 percent feel pressured and stressed. This shows a very good sign of the emotional wellness among the participants. School requirements and other work-related pressures and worries might account for the 6 percent of the participants being anxious. Although, it is still important to note that other factors, like family problems, financial deficiency, teacher-factor problem among students and other interpersonal-related problems may also account for this. Thus, there is also a need to

explore ways in which these factors may be addressed to help alleviate worries and unnecessary stress of the participants.

A large number of participants do involve themselves in regular physical exercise. Still there are those participants who do not engage in regular exercise. The frequency and duration of exercises among participants vary. A good sign though is that 65 percent of the participants at least exercise 15 to 30 minutes a day. Walking has the highest percentage compared to the other forms of exercises mentioned in the survey. The shady, peaceful, and nature laden 28 hectare land terrain of the DLSU-D makes it conducive to stroll their way to the different buildings to attend their classes.

Results show that 94 percent of the participants do have an intake of fruit and vegetables. The frequency of intake varies though. Only 43 percent have intakes every day. A slightly smaller group (27%) have it once to twice a week or thrice to four times a week. An even smaller group of two percent includes fruits and vegetables in their diet once a month. The importance of having fibrous food within an individual's diet has been noted. Thus, the school should be made aware of the need to have vegetables and fruits as part of the regular diet of their population. Campaigns and poster advertisements may be part of reinforcing such habit. It would help if canteen concessionaires would also be encouraged to offer choices of fruits and vegetables that would be included in every meal.

About 64 percent of the participants regularly drink soda and are fond of eating junk food. The high incidence of junk food intake is quite alarming just the same as the incidence of lesser fruit and vegetables intake by the population. It could be deduced that many among the participants have an unhealthy diet. Policy changes might be needed to make students aware of the dangers these kinds of food could pose towards their health.

The results on healthy habits and practices are very promising since 96 percent of the participants believed in the need to improve their health habits. This also indicates their willingness to change their lifestyle. Majority (27%) chose the need to improve their healthy eating habits. Twenty percent pointed out the need to have proper stress management while 19 percent advocated for involvement in a regular physical activity. Surprisingly, only eight percent pointed on the avoidance of alcoholic beverage and only five percent thought of stopping tobacco and cigarette usage. Given the larger number of respondents admitting alcohol and tobacco use, the recognition of the need to cease or change this habit is wanting. However, with most of the participants, it is evident that they are aware of the need for change towards healthy eating habits, regular exercise, and stress management.

Accessibility of health services within the university was rated high by the participants at 70 percent and 33 percent rated high the presence of programs and services promoting healthy lifestyle and behaviour within the university. However, there is a need for medical and nutrition counselling to make the services more complete.

Role of De La Salle University-Dasmariñas

Results show that 34 of the participants believe in the role of the university in educating its population concerning healthy habits, lifestyle and behaviour. The stakeholders of an educational institution like De La Salle University acknowledge that the best role of the school in promoting a healthy lifestyle is in educating its population. Making individuals aware of the need and importance of promoting healthy habits, lifestyle, and behaviour is the first step towards achieving a goal of having a healthy university. Putting into reality the knowledge and awareness of such need and importance would need programs and services that would be highly accessible to every individual. It is also necessary to evaluate each program set in order to know if objectives are met. At present, the on-going program is aligned with the objectives of the Healthy University project.

PROJECTS AND RECOMMENDATIONS

There were four initiatives done by the research committee related to the establishment of healthy university model in De La Salle University-Dasmariñas.

First is the advocacy with the university management where the receipt of contract/agreement of the performance work from World Health Organization marks the commitment of DLSU-D to work on a project with the Department of Health-Philippines and World Health Organization. Next is to organizing the Steering Committee. Third is orienting the school stakeholders where the representatives of various sectors in the university – faculty, staff, students, parents, concessionaires, and alumni were informed and oriented about the research and projects. The launching of healthy lifestyle project was done through a medical mission where a medical team was made available to the stakeholders of DLSU-D for their height and weight check, blood pressure, and blood sugar check up and nutrition counselling. The following are the recommended projects for the Healthy University Program.

1. Revisiting/review of institutional policies. A committee that would review the contracts and policies of the institution related to the establishment of healthy lifestyle and behaviour shall be created. This will include lining up of programs through seminars that would establish healthy lifestyle; and encouraging canteen concessionaires to sell healthy food and alternatives. The curriculum of different programs shall, likewise, be revisited to include topics that would help sustain the healthy practice and lifestyle of the stakeholders. Policies on the reservation and availability of PE grounds, court, gymnasium, field, oval, and other venue for all sectors of the university (faculty, students, administrators, parents, alumni) shall be assessed to give way to stakeholders who would like to engage in physical activity such as games, dances and exercises especially after regular classes.

2. Healthy lifestyle campaign activities. Signage/posters/tarpaulins should be printed and be made visible in strategic places in the university. Slogans in these materials shall be based on daily activities of DLSU-D stakeholders such as using the stairs instead of an elevator, walking, choosing and eating healthy foods, regularly visiting the clinic, discouragement in adapting vices, among others. A series of easy-to-learn exercises (taebo, aerobics, etc.) will be made available to audience who expressed their willingness to join sponsored by the P.E. Department. Stakeholders who are cigarette smokers will be invited to smoking-cessation counselling. Seminar-Lecture Series should be given to stakeholders on how to maintain a healthy lifestyle thus rippling such practice to their immediate community, relatives and friends.

3. Availability and accessibility of healthy lifestyle materials. Website upload - The Information and Communications Technology Office will be involved in establishing a "healthy lifestyle linkage" in the university's homepage (www.dasma.dlsu.edu.ph). Various materials on Healthy Lifestyle (HL) such as exercise videos, HL activities-documentation, seminar materials, and the like will be uploaded in the link. Likewise, the General Education TV of the Office of the Vice Chancellor for Academics and La Salle Radio shall be utilized to feature shows and episodes that discuss about topics beneficial to stakeholders in their attempts to establish a healthy lifestyle. The official student publication that reaches majority of the DLSU-D community will, likewise, be maximized in the healthy lifestyle information dissemination. Information materials patterned after the brochures, leaflets, and other print materials of the Department of Health will be produced in bulk to give way to wide distribution and dissemination to the community/university stakeholders. Among others that will be included are the catchy slogans and healthy lifestyle tips. Intensive partnership with Dasmariñas City Government shall also be done to strengthen the political will of the city government in its campaign for healthy lifestyle in the municipality. Various projects will be undertaken to educate the community thereby raising the consciousness and commitment of the people to uphold healthy life.

BEST PRACTICES OF RURAL SCHOOL SMARTIZATION PROJECT 2009: A CASE STUDY OF NINE RURAL SCHOOLS

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ABSTRACT

In the provision of education to Malaysian students in dispersed areas, particularly the rural schools, Malaysian Ministry of Education/Mdec (Malaysia Development Corporation/Malaysia Super Corridor) initiated Rural School Smartization project in 2009. The project provides a new educational environment that complements and extends traditional educational practices. Nine schools received coaching from designated university coaches as part of strategic alliances between service providers and universities. The smartization project reports were submitted on monthly basis till the completion of the project by the coaches were interpretively analyzed. This report reveals successful strategies implemented in the smartization of rural schools developed during the period in terms of school system responsiveness in planning and making ICT an integral part of the school strategic plan. It describes university lecturers' strategies in coaching teachers in rural schools to be technology integrators, enabling administrators' integration efforts, and to explore best practices in transforming elearning into teaching instruction for academic sustainability and competitiveness.

Keywords: Smartization, designated coaches, rural, secondary school, ICT

INTRODUCTION

The idea of technology integration can be traced in the last several decades from teaching programming, to utilizing drill and practice, to implementing integrated learning systems, to addressing computer literacy skills, as well as participating in web-based communities. A current view of technology integration involves the practice of using technology in ways that are both curriculum-based and future-oriented. According to Ertmer (1999), teachers should focus on meeting content objectives within communication, collaboration, and creative problem-solving domains. It also requires that attention be given to preparing students for the future: theirs, not ours. Therefore, the best practice as a reliable technique or methodology that will lead to a desired result through experience and research must be sought. A commitment to use the best practices in any field is a commitment to using all the knowledge and technology at one's disposal to ensure success. In the field of education, it is usually associated with work that is serious, thoughtful, and informed by current research in teaching and learning. In fact, these practices are considered "best" when leaders in the field who understand and represent exemplary teaching strategies also recommend them. Educators today are busy highlighting examples where technology has created new spaces for teaching and learning through online applications like tele-conferencing and e-mailing. Inspite of such enthusiasm, the implementation of technology in the teaching and learning in rural setting/context should be used with caution, despite the positive claims and enthusiasm. However, technology has been used to learn and to teach technology called technology education. Technology can be used also to learn other things. Theoretically, the skills provided through a proper technology education seem to be those same skills that are provided through proper learning with ICT, that is, concepts of problem solving and innovation as well as collaboration.

BEST PRACTICES OF RURAL SCHOOL SMARTIZATION PROJECT 2009: A CASE STUDY OF NINE RURAL SCHOOLS

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ABSTRACT

In the provision of education to Malaysian students in dispersed areas, particularly the rural schools, Malaysian Ministry of Education/Mdec (Malaysia Development Corporation/Malaysia Super Corridor) initiated Rural School Smartization project in 2009. The project provides a new educational environment that complements and extends traditional educational practices. Nine schools received coaching from designated university coaches as part of strategic alliances between service providers and universities. The smartization project reports were submitted on monthly basis till the completion of the project by the coaches were interpretively analyzed. This report reveals successful strategies implemented in the smartization of rural schools developed during the period in terms of school system responsiveness in planning and making ICT an integral part of the school strategic plan. It describes university lecturers' strategies in coaching teachers in rural schools to be technology integrators, enabling administrators' integration efforts, and to explore best practices in transforming elearning into teaching instruction for academic sustainability and competitiveness.

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INTRODUCTION

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ICT integration includes the concept of content in the form of digitalized books and elearning as well. It seems that misconception of learning in ICT integration arises when a learner learns by reading books from the screen of a computer and then sits a test that demonstrates how much she/he actually has learned. Isn't it a shame that the government is investing so much money and other resources in ICT and other resources that may be available in creative and innovative ways but the teachers are still repeating the problems of face-to-face education, denoted by book-based memorizing for centuries?

Schools in the rural areas have computers and other ICT resources but in very bad condition due to lack of basic infrastructure and mismanagement. It is a complete waste of resources. ICT integration seems to mean only classroom integration. Ravenscroft (2001: 134), for example, argued that "we cannot truly transform educational practice for the better through using new technologies unless we examine the roles the computer can play in truly stimulating, supporting, and favoring innovative learning interactions that are linked to conceptual development and improvements in understanding" (Nichols, 2003: 4). A case in point is the teaching and learning in rural school context. Technology enhanced and technology-based applications are regarded as unfriendly to the context, especially among schools located in the rural areas. However, enticing it maybe, there is an urgent need to recognize and address the technology integration dimensions that affect teaching learning before any technology-based teaching methodology can be adapted effectively. In order to enhance the efficiency and quality of education in ICT integration, Malaysian Development Corporation (Mdec) was given the task by Malaysia Ministry of Education (MOE) to embark on smartization of rural schools project based on her successful experience in implementing SSQS (Smart School Qualifying System) to 88 Malaysian Smart Schools in 2008.

This report describes university coaches' strategies in coaching teachers in rural schools to be technology integrators, enabling administrators' integration efforts, and to explore best practices in transforming elearning into teaching instruction for academic sustainability and competitiveness. It is based on the current smart practices implemented in the Malaysian Smart School project and to examine how the rural smartization program is realized through these practices in contexts, in this case the nine rural schools. The aim of this report is to document the experiences of nine rural schools practices in the use of technology in education in order to learn from their successes, as well as to avoid the pitfalls and failures for future initiatives. Such practices could be adapted to promote the use of ICT in schools in a most integrated way, contributing towards improvements in educational quality and learning.

The present study has certain limitations that need to be taken into account. Certainly, a limitation of this study excludes external validity, or the generalizability of the study to other contexts, since the data came from nine selected rural schools. Another factor that limits the generalizability of this study is the minimal interactions between coaches and teachers. While the study did not make any attempt to compare similarities and differences between rural and urban schools, it is recognized that the ICT infrastructures in certain schools influences the degree of integration and transferability.

METHODOLOGY

So what may be expected from a rural school experience that uses best practices as they relate to technology integration? To answer this question, a narrative analysis of the report submitted by the four university lecturers who were designated as coaches in nine rural schools was conducted.

Sites

Nine rural schools located in the rural areas of Malaysia were selected. They are government aided schools and specifically identified for the Rural Smart School project by the Ministry of Education Malaysia (MOE), undertaken by Mdec (Malaysia Development Corporation, formerly known as Malaysia Super

Corridor (MSC). The schools comprised of both primary and secondary, staffed between 20 and 100 teachers. A variety of computer-related technologies were available at these schools such as digital whiteboards, scanners, and various display devices (supplied under the project). Each school had a computer laboratory with a fixed-rotation schedule. The schedules varied at each site. Time allotments ranged from 35 minutes to 60 minutes approximately every six days.

Participants

The participants are four education lecturers from public universities who were involved in coaching their designated schools. One was designated three schools, and the others were two schools. They were recruited by KPM/Mdec based on their successful stints as subject matter experts in the Smartization Project of 99 schools in 2008. The coaching entails four domains, that is, ICT integration, human resource, application, and infrastructure. Smart Brigade and Buddy schools itinerary were later included. They are required to furnish to Mdec/MOE a monthly report of the best practices in ICT integration conducted in their designated schools.

Data

Data was gathered from the best practices reports from nine schools submitted to Mdec (Malaysia Development Corporation/MSC) at the end of the month, beginning from project initiation in March, 2009 till November, 2009. Data were gathered from documents in the form of reports that were refined during focus group meetings held monthly. Each lecturer participated in seven focus group meetings. Since the purpose of the study was to identify best teaching practices related to technology integration, the data from these reports coincide with the school ICT initiatives displayed.

Data Expedition

The analysis involved searching for basic themes for meaning-making in the collected data (Miles & Huberman, 1994). Through inductive analysis, categories, themes, and patterns emerge from the data (Boyatzis, 1990). Narrative analysis was employed as a means to interpret the data collected. This began as data were first collected and ran throughout the study. Triangulation was evident after a review of focus group discussions and school report documents confirmed the trustworthiness of the reported best practices. The research questions guided the selection of best practices that are discussed but did not limit the reporting of what was practiced. In most cases, the best practice that was reported is told as it was delivered by one school. In few instances, the best practice reported is a combination of what two or more schools did. Because the purpose of the report was descriptive, the report does not make comparisons between schools.

In this report, questions were constructed to reveal not only the best ICT integration practices but also to learn the schools' initiatives that guided their decision making. The following questions provide a more precise statement of the best practices uncovered in the project: (a) How do these rural schools respond to smartization? (b) How do these schools integrate the ICT into the school system? (c)What are the best practices do these schools employed to integrate ICT?

RESULTS

At the end of the project, there were formal discussions about technology integration as practiced in the schools by the coaches, who were subject matter experts in teaching computers and technology usage. Based on these discussions and narrative reports, a general conclusion emerged that best teaching practices and best technology integration practices go hand-in-hand.

Question 1: How Do These Rural Schools Respond to Smartization?

It was not difficult to learn that the success of ICT integration in the school system requires commitment from the school administrators. The support by the administrators who champion the cause will ensure smooth transition from close to open education capabilities. The practices for ICT integration initiatives found to be widely used in these schools are very pertinent. The school administrators' role in ensuring the recordkeeping on the use of ICT in their schools, followed by periodic announcement of ICT development in schools for teachers and students information, sustained teachers' initiative. They also ensure that all ICT-based materials are recorded in the e-folder according to subjects and class levels. The administrators took the initiative of smooth implementation by coordinating courses for web-tv, as well as making the rooms available for the purpose. The room too, was stocked with the web-tv materials. E-printing system is installed in a strategic location for teachers' use. Clearly, four best practices on how the rural schools respond to smartization are as follows:

ICT Integration Initiatives

- School Administrators make ready master record of ICT use and the developments of ICT integration in the school were displayed in the Staffroom notice board (1a1).
- Teachers are required to produce at least one ICT-based material (as a group) on their subject specific, every fortnight. Novice teachers are paired with the experienced subject teachers (1b1).
- The ICT-based teaching and learning materials, according to class and subjects, were recorded and kept in the E-Folder (1c1).
- Courses on web-TV integration in teaching and learning were conducted for teachers, besides building collection of web-TV based materials (2b1).
- E-printing was made available and teachers were trained to use it (2b1).

Human Resource

- Staff development committee conducted regular ICT-based workshops, every fortnight (1a2).
- In house courses conducted by senior subject teachers, School Net facilitators, and Smart school coordinator on Saturdays (1a2).

Responsive System Spearheaded by School Administrators

- The school administrators prepared a master record and displayed it in the staff room (1a1).
- Latest information on the school's progress in ICT usage and integration are relayed to the teachers and students via LCD TV located in the school's lobby (1b1).
- Ensure that every ICT based teaching and learning materials prepared for various subjects and levels are recorded and kept in the E-Folder for reference(1c1)

Enabling Effort by Smart Coordinator

- Smart School coordinator prepared the schedule for ICT training for teachers during school hours to fit teachers' free time and levels (2c2).
- Initiate the move to open the Audio Visual room till evening (2c2).
- Scheduling the time for AV room opening hours (2c2).
- Placing the printers at strategic location and training teachers to use it (2b1).

Question 2: How Do These Coaches Guide the Schools to Integrate the ICT Into the School System?

The coaches' task in guiding the schools in integrating ICT was focused on building teachers' ICT literacy database for the purpose of identifying their needs as well as identifying those who could contribute as trainers. Various courses on web building, maintenance, and administrator were conducted to teachers and students upon the advice of these coaches. Advanced courses on ICT-based courses in trouble shooting,

video editing, flash, and others were conducted to equip their staff. As part of sharing initiative, the teachers' lesson plans were uploaded into the website for others to access. Another aspect that was the main focus of the coaches was the special documentation system whereby the subject files, timetables, and others were easily accessible. Another initiative was the formation of Smart Brigade manned by students. The brigade is the nerve centre for the training students on the use of ICT and computer skills. The coaches assisted teachers and administrators in inculcating smart school culture based on ICT integration. Some of the best practices as a result of the coaching are as follows:

- Conducting in-house training on ICT on weekend (1a2).
- Organizing teachers into subject groups (headed by expert teachers) to produce ICT-based teaching practice every three weeks (1b1).
- Organize courses on how to integrate web-TV in TL, collect and collate web-TV materials (2b1).
- Updating School website on regular basis (1b1).
- Assist the school administrators on how to use school i-managament system supplied by MOE (2c3.).
- Database on ICT literacy made available for easy identification of experience teachers to act as trainer/facilitator (1b2).
- Guiding teachers to use attached files on their subjects, and sending their LPs to the principal online every week (2b1).
- Smart brigade members (students) conducted course on building a website, maintenance course and uploading materials (2b2).
- Conducting extension programme on ICT such F1 model, trouble shooting courses, and video editing.
- Smart brigade initiated to encourage ICT culture among students. They are housed in a special centre to help them to provide support to their friends.

Question 3: What are the Best Practices Do These Schools Employed to Integrate ICT?

Overall, the schools involved in this smartization project employed a holistic approach by creating smart documentation system. This is followed by improving on their general operation, and finally initiating self-learning that encompasses comprehensive sharing of resources among the staff. Every subject teacher prepares the files for each subject/class taught according to students' level and these files are recorded by the schools' Head of Subject. There are also uploaded exercises for their students to do. These files are constantly updated and monitored by the senior assistants and the principals. Three best practices employed to integrate ICT are as follows:

Smart Documentation System

- Initiating special documentation system on smart school.
- Filing information system, SMS and timetable for self directed learning centres and computer lab after school hours.

General Operation

- Self Access operated till 9 pm under teachers and Smart Brigade supervision (2b3).
- ICT culture was initiated in every event in the school (3a1).
- Latest information on ICT was displayed for viewing (1b1).
- Sharing Teaching and Learning materials for reference (2b4).

Self Learning Initiatives

- Self learning initiatives comprised of subject coordinator forming a committee to prepare relevant topics, scheme of work, as well as materials. Each teacher is required to prepare eight topics per month (2c1).

SUMMARY

In this rural schools smartization programme, three ICT integration practices have changed the nature of education in these rural schools. The best practices enacted during the implementation of the project culminated into three main initiatives. There are as follows: (a) A well-planned and responsive school system to provide an appropriate enabling, environment for the successful implementation of Rural School Smartization programme; (b) Making ICT as an integral part of the school strategic plan and ensure programme support, ICT in education/initiatives; and (c) A holistic approach - going beyond a technological dimension.

Relatively little research has been conducted that examines the best practices of rural school in providing e-instruction to their students due to lack of basic infrastructure and amenities. This study does reveal some promising best practices but more research is needed.

REFERENCES

Bogdan, R. C., & Biklen, S. K. (1992). *Qualitative research for education: An introduction to theory and methods* (2nd ed.). Boston: Allyn & Bacon.

Boyatzis, R. E. (1998). *Transforming qualitative information: thematic analysis and code development.* Thousand Oaks, CA: Sage Publications.

Dede, C. (2000). Emerging influences of information technology on school curriculum. *Journal of Curriculum Studies, 32*(2), 281-303.

Dias, L. B. (2000). *Best practices of technology integrating teachers: Pictures of practice from four elementary classrooms*. Unpublished Dissertation, Georgia State University, Atlanta.

Ertmer, P. A. (1999). Addressing first- and second-order barriers to change: Strategies for technology integration. *Educational Technology Research and Development, 47*(4), 47-61.

Hadley, M., & Sheingold, K. (1993). Commonalities and distinctive patterns in teachers integration of computers. *American Journal of Education, 101*(3), 261-315.

Hawkins, J., Culp, K. M., Gilbert, J., Mesa, L., & Schwarz, J. (1999). *Technology integration in Chicago public elementary schools, 1997-1998*. Chicago: Center for Children & Technology.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expande sourcebook.* Thousand Oaks, CA: Sage.

Ministry of Education. (1998). *A Guide towards smart school. Curriculum development centre.*

Nichols, M. (2003). A Theory for eLearning. *Educational Technology & Society, 6*(2):1-10.

Ravenscroft, A. (2001). Designing E-learning interactions in the 21st century: Revisiting and rethinking the role of theory. *European Journal of Education, 36*(2), 133-156.

Roblyer, M. D., & Edwards, J. (2000). *Integrating educational technology into teaching* (2nd ed.). Upper Saddle River, NJ: Merril.

UNESCO (2004). I*CTs into Education: Lessons Learned. A Collective Study of Six Asian Countries.* UNESCO Asia and Pacific Regional Bureau for Education: Bangkok , Thailand.

Vockell, E., Jancich, H., & Sweeney, J. (1994). What makes teachers use computers? *Journal of Technology and Teacher Education, 2*(2), 107-117.

Zemelman, S., Daniels, H., & Hyde, A. (1998). *Best practice: New standards for teaching and learning in America's schools* (2nd ed.). Portsmouth, NH: Heinemann.

TRANSFORMING CULTURES TOWARD STRATEGIC ALLIANCES IN HIGHER EDUCATION

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ABSTRACT

As a general rule, good alliances could only happen when there are complementarities between the parties involved. In the case of higher education the impacts of technology on contents and delivery of teaching and learning for example have been received differently in the West than in the East. This does not provide encouraging potential for strategic alliances on a global scale. This paper introduces a three dimensional (3D) model of accelerated improvement in higher education for developing countries to open the possibilities for strategic alliances with higher education institutions in developed countries. The three dimensions are technology (as used in higher education), generational characteristics and subject contents. While touching on technology and contents, this paper focuses on generational characteristics and compares those of the youths in the USA (via literature surveys) with the youths of ASEAN (via primary surveys in several universities in Malaysia and Indonesia). Findings from this work indicate the need to transform the local teaching and learning cultures to help bring the region towards possible strategic alliance with global higher education institutions.

Keywords: Higher education, transformation, technology, generational characteristics, subject contents, strategic alliance

INTRODUCTION

The impacts of technology pervade every human activity. Higher education therefore is not immune to these impacts. Importantly higher education will also need to succumb to secondary impacts in the form of changed characteristics of its constituencies, namely the students and the staff.

Idrus (2010) discussed some background on aspects of this and suggested a 3D model for continual improvement of higher education institutions in order to make them current despite the rapid changes in technology and hence the rapid changes in the various characteristics alluded to above. The three dimensions are *technology* and its application in the delivery of teaching and learning, the *characteristics of the Net Gen* and the subject *contents* of what is to be taught. In suggesting that model for developing countries such as Malaysia, it is firstly important to ascertain that there are indeed similarities between the Net Gen in developed countries such as the USA and those in developing countries. The point being that if there are significant differences between the two Net Gens, then the adoption of teaching and learning methods in developed countries may not be appropriate for developing countries until the characteristics of their students warrant it.

A preliminary survey of higher education students in various faculties at UNIRAZAK and at JWC in Indonesia on their characteristics as Net Gens was carried out. While students in Malaysia and Indonesia do not represent all the students in developing countries, comparative analysis between the two groups and

then between them and the students in the USA as available through literature, would provide some confidence in pursuing further with research in this area.

Finally, this paper extrapolates the results obtained to predictions on the potential strategic alliances between higher education institutions in developed and developing countries.

Characteristics of the Net Gen in the USA

Out of seven years of accumulated papers published in the e-Journal "Innovate" (http://www.innovateonline.info) reasonable agreement on the characteristics of the Net Gen in the USA can be summarized as follows:

- They have a great facility for technology and an eagerness for change.
- They assume that information is to be shared, not hoarded.
- They have a lack of patience with bureaucracy.
- They have a passion for service and a desire to make a (big) difference.
- They are multiskilled and able to do up to four different things at the same time.
- They tend to teamwork, prefer experiential activities, and use technology.
- They prefer to be involved in creating rather than being passive recipients.
- Students coming to college expect a "transformative education".
- They are ready for multimedia learning to be delivered on a flexible learning. schedule, one that is not tied to a set time and place.
- They would want faculty members to use information technology to communicate knowledge better.
- 41 percent of the students surveyed said that they preferred instructors to make moderate use of information technology.
- Social networking is the basis of Net Gens characteristics – Facebook is used by students extensively and is beginning to be used by faculty members.

Impacts of the Net Gen Characteristics

The above characteristics naturally beg many questions for higher education institutions, including:

- How do we implement and evaluate new learning technologies when the speed of technological evolution far outstrips the rate of adoption?
- How do we develop new and amend existing programs to cater for the Net Gen's characteristics?
- How do we justify potentially extensive spending on new learning technologies, new learning materials, new program development, new recruitment if not major re-training of existing academic staff, and the like?
- How do we confront the demands of active learners who are not content with traditional teaching models?
- How do we turn academic staff to accept and be proactive about the new methods and technologies of learning?

Table 1 shows the differences that need to be addressed as we move from traditional to the Net Gen required methods.

Table 1
Comparing Traditional and Net Gen's Based Learning

Traditional	Net Gen's based
○ Encourage and reward individual knowledge stored in the head	○ Prefer and emphasize Distributed knowledge
○ Does not allow students to network with each other and with various tools and technologies and be rewarded for doing so	○ Like to network and share ○ Multidisciplinary ○ Boundary-less classrooms
○ To narrowly constrain where students can gain knowledge	○ Utilize widely dispersed knowledge ○ Emphasis on experiential learning
○ Pedagogy is built on models that require solitary, independent learning	○ Against the traditional pedagogy → need to understand how Net-Gens understand and process texts and to create a pedagogy that leverages the learning skills of this type of learners

Thus learning styles such as Project-based or Problem-based learning would increasingly dominate in the future, with the potential consequence of changing the higher education system altogether from *serial learning* to *parallel learning*.

In *serial learning* students are taught in chunks of knowledge with increasing difficulties or challenges. Thus, students study and pass for example Mathematics 101 before progressing to Mathematics 201 and then to Mathematics 301 and so on. Essentially, they do A first before B, B first before C, C first before D, and so on.

Importantly, the Net Gen is able to do A, B, C, and D simultaneously. Here lies, therefore, the great challenge for educators while meeting the requirements of the Net Gens as soon as possible. Thus, before they decide to leave the entire education system altogether, we do need assure that the changes are done in such a way that the resulting model will entice rather than repel the Net Gens. There is, therefore, a lot of actual academic and marketing work to be done and be done by the educators themselves.

In *serial learning* students are not generally introduced to a practical problem until later on in the program and that the learning done on those preparatory courses are not generally required until then at which time students would have forgotten them. The Net Gens are pushing the frontier of this required change. Therefore what we have seen so far will be just a small aberration in comparison with what will need to change soon. The much bigger question then will be how we change the well entrenched curriculum development of courses to date. The condition of university teaching and learning in Asia in general and in Southeast Asia in particular (Idrus, 2004), where rote learning and spoon-feeding are prevalent, will mean that the change to meet the requirements of the Net Gens is going to be even more formidable although not impossible. It is very important to know precisely the profile of students in Asia in order to determine the most appropriate learning styles to adopt in order to ensure their effective learning.

A survey instrument was developed to solicit information to build the students' profile.

QUESTIONNAIRE AND METHODOLOGY

Thirty questions formed the questionnaire. They are developed following careful analysis of the Net Gen's characteristics in the USA as found in the literature. By doing this, it does not necessarily mean that the Net Gens in America are right or wrong, but only to facilitate comparisons. The questions were self-developed to ensure that respondents would not have difficulties in understanding and answering them. The questions were thoroughly checked for clarity, ambiguity, and ambivalence before use and the normal statistical tests were carried out. The Average Cronbach α is = 0.908 which shows that the questionnaire has a very good internal consistency as the minimum normally required for this is 0.700 (Lopez, 2007).

The questionnaire was distributed to some 55 lecturers from 7 schools at UNIRAZAK and 4 lecturers at JWC in Jakarta, Indonesia. The reason for getting responses from these two countries is simply that in terms of culture and ancestry, the people of Malaysia and Indonesia are comparable in many ways. This was considered to be helpful in order to establish appropriate comparisons. It is intended that other countries in Southeast Asia will be included in this research project so that a better conclusion could be made of at least Southeast Asian Net Gens and a more valid comparison may be made against the American Net Gens.

In order to make data analysis effective, the 30 questions were classified into 9 groups of characteristics as shown in Table 2.

Table 2
Summary of Survey Results

No.	Measure	Result
1	Introduction to computer technology	This measure will show whether respondents are indeed born into the computer age and take advantage of it.
2	Extent of use of computer technology – application software etc	This measure will show whether respondents are heavy users of computer-based facilities or not. A limited extent of use may preclude them from taking advantage of the rapidly developing software and hardware.
3	Networking using computer technology	Vast and frequent networking would indicate one of the Net Gens' characteristics of sharing rather than hoarding information.
4	Commitment to technology through ownership of hardware	Commitment to certain things is normally reflected by the willingness to spend one's own money on purchasing either the hardware or software or both in this case.
5	Multi-skilled; able to do a number of actions simultaneously	This measure typically identifies the Net Gens and as expected would impel HEIs to adopt a revised learning delivery and therefore lecturers' job description.
6	Learning delivery preference	This question to see whether the students prefer the current method of learning delivery or a more technology-based one.
7	Technology preference in learning	This measure will also change HEIs learning delivery.

No.	Measure	Result
8	Preference for interactions	Again this measure will also change HEIs learning delivery.
9	Preference for continuous assessment	This measure would indicate the wish to be assessed on knowledge rather than memory as would happen in the case of Final examinations.

RESULTS AND DISCUSSION

At UNIRAZAK, 585 responses were received with about 13 percent invalid due to nonresponse for some questions. These responses came from four faculties/schools and nine different courses in Education and Social Science, eight different courses in Business Administration, five different courses in Information Technology, and one course in Business and Entrepreneurship.

At JWC a total of 104 responses were received with about 10 percent being invalid for similar reason as above. Responses came from two faculties, namely Computer Science and Marketing. The Faculty of Computer Science distributed the survey questionnaire to three courses, viz. Web Programming, Application Services, and Object Oriented Programming while the Faculty of Marketing distributed the survey questionnaire to the Business Communication course.

In carrying out the analysis, responses are compared to an "Ideal" response obtained from studying the U.S. Net Gens and assigning responses to each of the 30 questions in the questionnaire. The analysis used three independent sets of statistics namely:

- Variations from the Ideal of each of the responses, summarized as average variations either by group or for all questions in the questionnaire;
- correlations between the Ideal and each of the responses, summarized as average correlations either by group or for all questions in the questionnaire;
- *F* test results between the Ideal and each of the responses, summarized as average F-test either by group or for all questions in the questionnaire. *F*-test results show the probability of two series of values being not significantly different, or in other words for those two series to be significantly the same.

The major results are summarized in Table 3 below:

Table 3
Major Results of the Survey for Net Gens at Unirazak and JWC

No.	Item	ED& SOSC (%)	BUS ADM (%)	IT (%)	BUS& ENTRE (%)	AVE ROW (%)	JWC (%)
1	Ave Var by Groups	26	26	24	22	24	24
2	Ave Var by all Qs	16	17	15	15	15	15
3	Ave Var Intro to Technology	-21	-23	-21	-21	-22	-21
4	Ave Var Appln of Technology	2	2	3	3	3	4
5	Ave Var Networking using Technology	50	52	43	43	45	36
6	Ave Var hardware ownership	29	37	34	34	33	30
7	Ave Var multiskilled	100	91	92	92	90	71
8	Ave Var learning delivery preference	-15	-13	-16	-16	-16	-12
9	Ave Var Tech pref learning	101	96	98	98	98	98
10	Ave Var pref for interactions	106	96	84	84	85	111

11	Ave Var pref for continuous assesmt	94	112	99	99	0.54	100
12	Ave Corr by Groups	0.43	0.47	0.54	0.54	0.31	0.55
13	Ave Corr by all Qs	0.31	0.26	0.34	0.32	0.32	0.41
14	Ave *F*-test by Groups	0.34	0.34	0.33	0.35	0.34	0.35
15	Ave *F*-test by all Qs	0.16	0.18	0.21	0.21	0.19	0.20

Comparisons between the Indonesian and Malaysian results were made using both correlation and *F*-Test. It was found that the correlation between the two is better than 0.982 and the probability that the series are significantly the same is better than 0.988.

From Table 3, the following observations are made: (a) The closest similarity between the U.S. and the Malaysian/Indonesian Net Genners is in the application of computer technology (Group 2); (b) The next closest is in their preference for a change in learning delivery (Group 6); (c) This is followed by their exposure to technology (Group 1) and then by their commitment to technology through the ownership of computers and associated equipment (Group 4) followed thereafter by their predilections towards networking (Group 3); and (d) In the case of being multiskilled, having the preference for the use of technology in learning, the preference for interactions and also for continuous assessment, Malaysian and Indonesian Net Genners surveyed appeared to be very different from the US Net Genners.

The above are confirmed by the correlation and *F*-test results, where there is only an overall 0.40 correlation between the US and the Malaysian/Indonesian Net Genners and that there is only an overall average of 0.26 probability that the two Net Genners' characteristics are not significantly different.

On the basis of the four characteristics showing significant differences, one could speculate that these are due to the Malaysian/Indonesian cultures and Malaysia/Indonesian education systems which succumb to rote learning and exam orientation. It would seem significant that the Malaysian government announced in June 2010 that it intends to abolish two national examinations, namely the end of primary school national exam and the end of lower secondary school national exam, soon. This decision would help in bridging the gaps observed in this study.

CONCLUSION

In summary, Table 4 gives the conclusions on the basis of the 12 characteristics alluded to earlier. This study show that Malaysian/Indonesian Net Genners are not the same as the U.S. Net Genners and that they need reasonably significant changes in about half of the characteristics investigated here. It is, therefore, inappropriate to adopt the U.S. teaching and learning system in Malaysia/Indonesia without proper preparation particularly in re-training the teachers (at primary and secondary schools) and lecturers at universities which amount to transforming the education cultures of the countries. Failing this, no strategic alliances would be of any advantage.

Table 4
Comparing US and Malaysian/Indonesian (MI) Net Gens Based on the 12 Characteristics

NO.	Net Gen Characteristic	US	M/I
1	They have a great facility for technology and an eagerness for change	√	√
2	They assume that information is to be shared, not hoarded	√	√
3	They have a lack of patience with bureaucracy	√	?

4	They have a passion for service, and a desire to make a (big) difference	√	?
5	They are multi-skilled and able to do up to four different things at the same time	√	×
6	They tend to teamwork, prefer experiential activities and use technology	√	√
7	They prefer to be involved in creating rather than being passive recipients	√	×
8	Students coming to college expect a 'transformative education'	√	×
9	They are ready for multimedia learning to be delivered on a flexible learning schedule, one that is not tied to a set time and place	√	×
10	They would want faculty members to use information technology to communicate knowledge better	√	?
11	41% of the students surveyed said that they preferred instructors to make moderate use of information technology	√	√
12	Social networking is the basis of net gens characteristics – Facebook is used by students extensively and is beginning to be used by faculty members	√	√

REFERENCES

Idrus, N. (2004). Education reform – A look at Asian perspectives. *Journal of Institutional Research in South East Asia*, 2(2).

Idrus, N. (in press). Challenges facing higher education as a service industry in a developing country. *International Journal of Services, Economics and Management.*

Innovate Journal 7 volumes worth of papers and articles on education and the US Net Genners access (n.d.). Retrieved Feb, March, April, May, June 2010, from http://www.innovateonline.info

Lopez, M. (2007). Estimation of Cronbach's alpha for sparse datasets. *The 20th Annual Conference of the National Advisory Committee on Computing Qualifications*, Samuel Mann and Noel Bridgeman (eds.). Nelson, New Zealand.

SEAAIR
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PLURALISM: OPPORTUNITIES AND CHALLENGES FOR STRATEGIC ALLIANCE AMONG SOUTH EAST ASIAN UNIVERSITIES

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ABSTRACT

The motives and goals of alliances among South East Asian universities are currently more on maintaining harmonious relationships. The existing alliances are generally on student exchange, staff exchange, and setting class in participating countries which have not contributed enough to strengthening sustainability capabilities. Therefore, there is a need to reformulate the motives and goals to help institutions increase their academic quality and to be always on edge with competition.

It was posited that the pluralistic context constituted by these countries provides the alliances with opportunities and challenges that will affect the nature of the alliances. The term 'pluralism' is delimited to the different organizational culture, interests, and capabilities from members in the alliances.

Data gathering was conducted through analyzing university websites. Secondary data from journals on strategy theories and pluralism were also included to support the main data.

Research findings present opportunities, together with obstacles of alliances and offer a model to accelerate the existing alliances beyond sisterhood into strategic ones and developing institutions' capabilities and competitive advantages both in academic – research and teaching – and management fields.

Keywords: Pluralism, strategic alliances, organizational culture

INTRODUCTION

Despite their nature as non-profit organizations, universities must do self-finance through their services to companies and government, and from tuition fees. Interestingly, recent development in the education sector shows that universities are no longer non-profit organizations. Universities need to go beyond self-sustainability and become profit-making organizations. This forces universities to develop better outcomes such as curriculum, courses, community services, research, and company services and be more efficient in running their organization.

Establishing strategic alliances can help universities face the current situation and the demands coming out of it. Through exchanging resources and activities, strategic alliances facilitate members in their "learning capabilities, stimulating innovation, integrating expertise, and disseminating and stabilizing learning" (Gebrekidan & Awuah, 2002).

Setting the current situation of higher education in South East Asia, it can be observed that some of these universities already had strategic alliances with other universities in and beyond the region. The alliances, however, are generally on student exchange, staff exchange, and setting class in participating countries. These forms of alliances are argued to be more on maintaining the existing harmonious relationships among the countries in the alliances than on increasing the quality and the competitiveness of each party.

The objective of the writing is to offer a model for reformulating the motives and goals from maintaining harmony to producing better outcomes of each party. More should be done with the alliances so that the alliances will confer unique differences to participating universities.

"The divergent goals and interests and sufficient power bases" of alliance members as well as nonmembers constitute the pluralistic context (Jarzabkowski & Fenton, 2006). In the discussion, the pluralistic context is delimited to the different organizational culture, interests, and capabilities from members in the alliances and, thus, leaves out the externally pluralistic context of the alliances. The authors posit that the pluralistic context constituted by these South East Asian universities provides the alliance with opportunities and challenges that will affect them which in the end will bring uniqueness to their members.

Data gathering was conducted through analyzing websites of 42 universities in South East Asia (Indonesia, Malaysia, Singapore, Thailand, the Philippines, and Vietnam). Interviewing Deans via email was cancelled since no sufficient reply was received. Secondary data from journals on strategy theories and pluralism were also included to support the argument.

FINDINGS

Focus of the analysis of the websites is on the forms, initiator, objectives and motives, and span of alliances.The aspects provide further explanation on the way universities treat and consider the significance of the alliances.

The analysis on alliances shows that in general, the alliances take form as the exchange of students, faculty staff, and culture. Besides exchange of information, there are some collaborative researches conducted as well as academic publications and thesis review and evaluation. For the students, the alliances offer a double degree and sandwich programs, while some are creating schools in the country of participating members. For the academic development, the alliances hold joint training/short-term program; sponsor and or participate in seminars/conferences; and establish networking/consortium.

The websites also show that initiators of the alliances vary, ranging from individuals (professor from a university contacting his/her colleague from other universities), school of studies/department , centers (which consist of faculty members or departments with various roots of knowledge) to international offices of the universities.

As it will be further explained in the discussion, the forms of the alliances already provide opportunities for the participating universities to increase their own institution quality. The question here is on the followup and the longevity of the alliances. The concern rises since there are varieties of initiator for the alliances. Those with individuals as the initiators are doubted to perform longevity since back-up from universities or organizations cannot be guaranteed. The uncertainty of the longevity of the alliances creates hindrances towards the optimum achievement of the objectives of the alliances. Lack of back-up might be resulted from the different motives of the initiators and the management of the institutions.

As with the objectives and motives, the following are stated on the websites: to enhance and enrich university's academic and research programs; to generate resources for university; to mobilize intellectual

resources into developmental and creative undertakings; to promote technology transfer and innovative strategies in teaching and research; and to enhance university's strategic positioning in local and global/international arena. From all the universities observed, only a few cover all the above objectives and motives, while most focus on the aim to enhance their strategic positioning in global and local arena.

Based on the span, the current alliances are bilateral (university to university) and regional (through associations and forums such as ACUCA, AUN, APRU). Analyzing the partners of the universities, we can see that certain criteria apply. Partners are those who belong in the same level or even higher than the university itself. Partners should also have same research interests because this will show their expertise. For example, in the bilateral span, most universitites in South East Asia have universities from western countries as their partners. Another example is the alliance of University of Indonesia and Universitas Kebangsaan Malaysia and De la Salle University (The Philippines) which are almost of the same size in terms of resources, expertise, and reputation; and small universities such as Maranatha Christian University (Indonesia) partnering with other small universities in bilateral term. Commenting on small universities and regional forum, the authors see that smaller universities should build alliances with universities having wider resources, higher expertise and reputation in order to learn from their partners while still contributing to the alliance (e.g. exchanging information).

The findings show that the significance of the alliances is still considered low by the universities. Only few already had an international office or person responsible for international alliances. Furthermore, none shows clear, specific, and operational objectives for their international alliances. With only standard objectives and mostly individual initiatives, the alliances bring less or even no benefit to participating universities which consequently, will not create competitive advantage of the institution. Moreover, although creating Memorandum of Understanding (MoU) is the next step generally taken following the objectives, the followup of MoU rarely happens as in the case of most universities in Indonesia (IDHGE, 2010).

More can be gained from the existing span of alliances when the objectives are clearer, more specific, and operational, and the initiative of the alliances come from departments or universities rather than individuals. Having departments, centers, or even universities as the initiators will provide stronger support to, better coordination, and generate objectives of the alliances that cover broader needs and interests than individual needs. Having nonindividual initiators also means having more varied resources as departments and universities naturally accomodate more variety of skills and expertise of their members.

The discussion in the next section will be on creating a model for accelerating the alliances into strategic ones. Pluralistic context will be the main consideration in the discussion.

DISCUSSION

A university should have clear, specific, and operational objectives for its alliances. Research findings show that in general, the objectives of the alliances are too broad and generic and have not yet reflected their specific needs nor considered their own resources. Some universities even tend to merely grab the opportunities of establishing alliances without having long-term plan for the alliances. Also, as mentioned previously, it is recommended that initiators of alliances come from departments or universites rather than individuals in order to avoid conflict of interets and to perform better coordination. Another benefit of having departments or universities as initiators is having better policies which means another support for the implementation of the alliances.

To have better objectives and policies, universities are recommended to include the following three categories of alliances: leveraging resources, integrating activities, and aligning positions. A model (Figure 1) is presented for the purpose of clearer explanation on accelerating the alliances among universities.

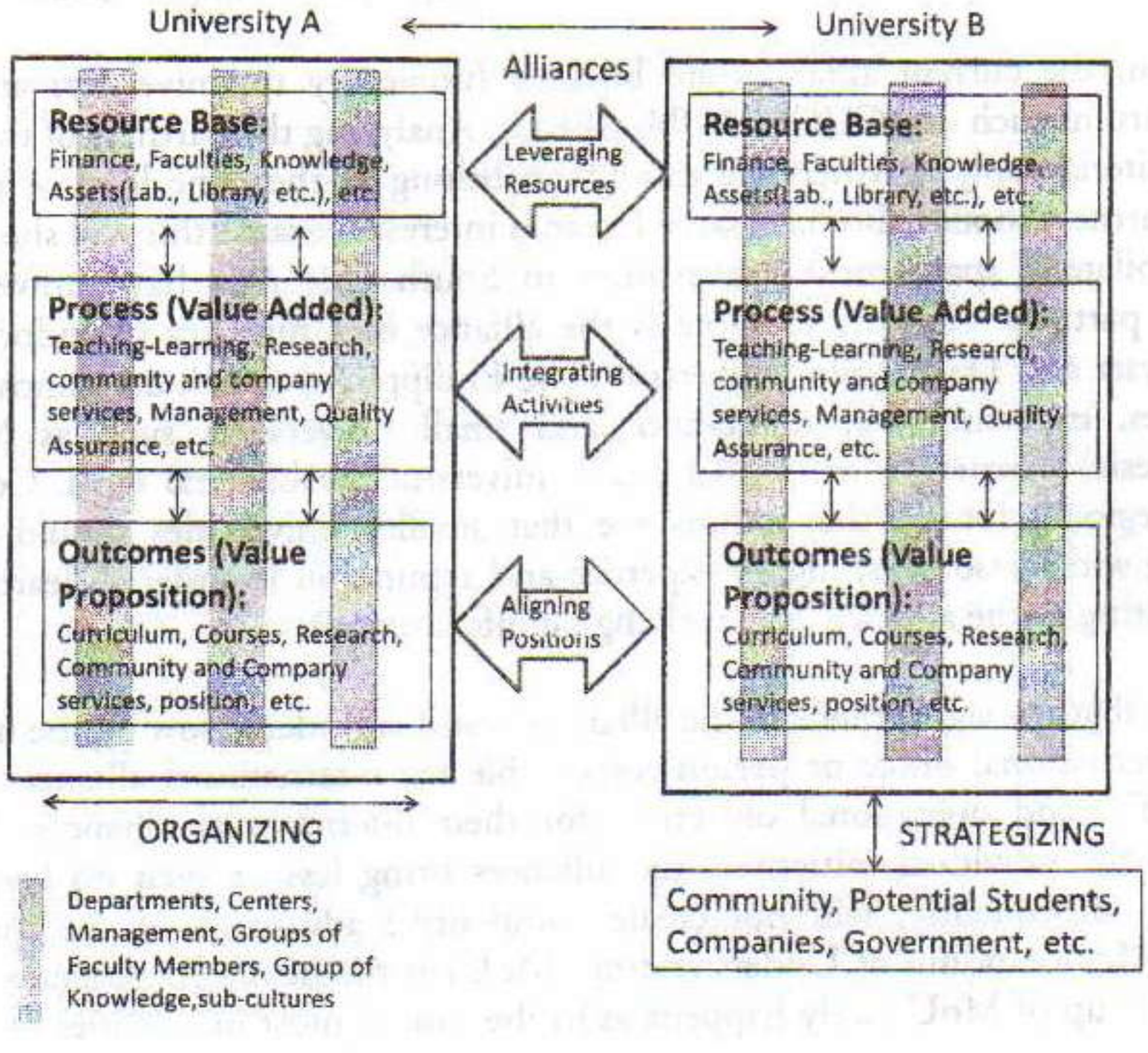


Figure 1. Alliances Synergy Model
(Adapted from De Wit – Meyer's Forms of Cross-Border Synergies, 2005)

Leveraging resources alliances assist participating universities in their resource base; for example: financing research and sharing facilities such as libraries and information. Integrating activities alliances add values to the process conducted by each university such as the process of teaching and learning, community service, and quality assurance. Aligning positions alliances help universities to offer better outcomes; for instance: more updated curriculum, and cross-culture curriculum. The three alliances will consequently bring stronger competitive advantages to universities as the alliances add more resources and values to the outcomes of the universities.

The pluralistic context of the alliances is caused by the various departments, centers, management, groups of faculty members, knowedge, and subcultures. Organizing these elements of pluralistic context is a must since managing this diversity will result in much more coordinated objectives and implementation. The awareness of the various elements constituting a university will encourage the university to better organize the elements. Maintaining the context is a necessity since more potential opportunities can raise from the pluralistic context such as building a centre of various knowledge, cross-culture knowledge and research, synergizing the different cultural aspects to strengthen the competitiveness of universities. In organizing the elements, a university should also perform good strategizing as the external factors (e.g. community, potential students, companies, governments) also affect alliances. Further research on strategizing is therefore needed.

CONCLUSIONS AND SUGGESTIONS

The existing alliances of the universities in South East Asia still have common and generic objectives and motives. Considering the pluralistic context of these universities, the authors believe that more can be gained from the alliances. The first step is to reformulate the objectives and the motives through the inclusion of the three categories of alliances: leveraging resources, integrating activities, and aligning positions. The second step is organizing which is managing the diverse elements in the universities: various departments, centers, managements, groups of faculty members, knowledge, and sub-cultures. These elements are the cause of the pluralistic context of the universities. The third step is digging for more opportunities raising from the pluralistic context as it will bring stronger competitive advantage to the universities.

Centers for international alliances should be established in order to accomodate and accelerate the operational alliances. Having a formal department managing the alliances will create stronger support to the implementation of the alliances and also to the establishment of more solid and productive alliances.

Since this is a preliminary research, further research should be conducted on inputs from primary sources as well as on the implementation of the alliances and the impacts on universities' developing quality and competitive advantage.

REFERENCES

Carayannis, E. G, Alexander, J., & Ioannidis, A. (2000). Leveraging knowledge, learning, and innovation in forming strategic government-university-industry (GUI) R&D partnerships in the US, Germany, and France. *Technovation, 20*, 477–488.

De Wit, B. & Meyer, R. (2005). Strategy synthesis: *Resolving strategy paradoxes to create competitive advantage*. London: Thomson Learning

Gebrekidan, D. A., & Awuah, G. B. (2002). Interorganizational cooperation: A new view of strategic alliances. The case of Swedish firms in the international market. *Industrial Marketing Management, 31*, 679 – 693.

Indonesia Directorate General of Higher Education (IDGHE), 2010, International Research Cooperation and Publication Guidance. Jakarta.

Jarzabkowsi, P. & Fenton, E. (2006). Strategizing and organizing in pluralistic contexts. *Long Range Planning Journal, 39*, 631-648.

Whitley, R. (2003). Competition and pluralism in the public sciences: The impact of institutional frameworks on the organization of academic science. *Research Policy, 32*, 1015 – 1029.

APPENDIX: List of sample universities site

Indonesia:
http://www.ui.ac.id, http://www.ugm.ac.id, http://www.itb.ac.id, http://www.ithb.ac.id,
http://www.petra.ac.id, http://www.ub.ac.id,
http://www.trisakti.ac.id, http://www.usd.ac.id, http://www.ubaya.ac.id, http://www.uksw.edu,
http://www.maranatha.edu,
http://www.unika.ac.id, http://www.widyatama.ac.id, http://www.uki.ac.id, http://www.unpar.ac.id,
http://www.uph.edu,
http://www.atmajaya.ac.id

Malaysia:
http://www.ukm.my, http://www.usm.my, http://www.unisel.edu.my, http://www.uum.edu.my,
http://www.iputra.edu.my,
http://www.um.edu.my

Philippines:
http://www.dlsu.edu.ph, http://www.admu.edu.ph, http://www.pcu.edu.ph, http://www.dlsl.edu.ph,
http://www.sanbeda.edu.ph
http://www.wesleyan.edu.ph, http://www.cpu.edu.ph, http://www.su.edu.ph, http://www.upd.edu/ph

Thailand:
http://ic.payap.ac.tn, http://www.au.edu, http://www.ait.ac.th, http://www.chula.ac.th,
http://www.apiu.edu

Singapore:
http://www.nus.edu.sg, http://www.smu.edu.sg, http://www.ntu.edu.sg

Vietnam:
http://www.ftu.edu.vn, http://www.ussh.edu.vn

COLLABORATION AMONG THE TEACHER EDUCATION INSTITUTIONS: THE PAFTE-CAVITE EXPERIENCE

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ABSTRACT

The Philippine Association for Teacher Education (PAFTE) is a network of caring and competent teacher educators engaged in continuing education, innovations, and scholarly works (PAFTE, 2008). When the dean of the College of Education of De La Salle University-Dasmarinas (DLSU-D) became the auditor of PAFTE Region IV-A Chapter in 2003, she, together with two other DLSU-D faculty, organized the provincial chapter. This was a response to the challenge posed by the Commission on Higher Education (CHED) IV-A Director to share the university's expertise with the other teacher education institutions (TEIs) in Cavite.

Through documentary analysis and key informant interview, this paper presents the historical growth of the association from 2004 to 2010 focusing on its role in providing its member schools with standardized policies in teacher education and sponsoring training programs for teachers and students that aimed to equip them with the necessary competencies, making them more competitive yet retaining their individual personalities. Specifically, the paper discusses (a) the specific programs sponsored by the association, (b) the benefits received by the member schools, (c) the issues and concerns that threatened the sustainability of the association, and (d) the recommendations for possible areas that can be strengthened.

Keywords: Collaboration, teacher education, school partnership

INTRODUCTION

Collaboration is defined simply in the Webster's Dictionary as the act of working together. This term is used synonymously with teamwork, partnership, alliance, networking, and cooperation. This is oftentimes used not only in the industry but also among the government and nongovernmental units, as well as in the schools. Collaboration among schools has been a common by-word. In the Philippines, schools are challenged to engage in collaborative or networking activities to develop linkages for faculty and student exchange programs; to share best practices in teaching and learning and/or school management and supervision; to provide opportunities for joint training programs; to do cooperative researches; to provide venues for a short visit; or to exchange books, journals, teaching materials, scientific papers, research reports, and other academic information. These are generally the contents of the Memorandum of Agreement (MOA) or Memorandum of Understanding (MOU) entered into by the two schools collaborating with each other.

Slater (2004) mentioned that "the ability to work collaboratively with others is becoming an essential component of contemporary school reform". She further stated that "as school systems in many countries

have restructured their organizational features and activities, the need to develop a more collaborative approach has been a part of the direction".

In conjunction, Inger (1993) and Garmston and Wellman (1999) discussed the need for a meaningful teacher collaboration. They asserted that "teacher collaboration produces significant benefits like improving student learning". Likewise, "collaboration and collective learning are considered as part of the characteristics and requirements in forming professional learning communities," according to DuFour and Eaker (1998) and Hord (1997). On the other hand, the National Staff Development Council (2010), as well as Riel and Fulton (2001), highlighted the role of technology in collaborative professional learning where they will be "able to share ideas, strategies, and tools with one another through interactive ways". All these point to the importance of "collaboration or the formation of partnerships amongst schools" which is a trend that is noted in society today (Slater, 2004).

The formation of partnerships among schools is not a new concept among Philippine educational institutions. The Mendiola consortium, which is based in Manila and was founded in 1974, has been a learning community for more than three decades. It derives meaning and success from the fruitful collaboration of the member schools' involvement in the areas of research, faculty development, student development, and community service (Mora, 2009). The South Manila Inter-Institutional Consortium, which was also founded in 1974, is another example of a successful partnership that primarily aims to foster collaboration among member-institutions by maximizing resources through joint course offerings, restructuring of curricula, exchange of information and faculty for academic excellence, and sharing of facilities (Banaga, 2009).

The formation of partnerships among schools does not only happen through these samples of school consortia. Partnerships among educational institutions also happen when professional organizations whose leaders are academicians extend the membership to institutions and not only to individuals. This is the case of the Philippine Association for Teacher Education or PAFTE.

Statement of the Problem

This study presented the historical growth of the Philippine Association for Teacher Education (PAFTE) - Cavite Chapter since its inception in 2004, focusing on its role in maintaining strategic alliance among the TEIs in the province.

Specifically, the following questions were answered in this study:

1. What programs were sponsored by the association for the Education students, for the Education teachers, and for the cooperating teachers and principals?
2. What benefits were received by the Education students, the Education teachers, and the cooperating teachers and principals?
3. What issues and concerns threatened the sustainability of the association? and
4. What other areas can the association strengthen to improve its services to its members?

METHODOLOGY

This study is a qualitative research that specifically used the documentary analysis and key informant interview techniques in gathering the data needed to answer the specific problems of the study. The documents that were studied and analyzed were the following: PAFTE-Cavite minutes of the meetings, letters, resolutions, attendance reports, and evaluation forms, as well as the issues of DLSU-D Newsette

and DepEd endorsements. For the key informant interview, there were six officers who were interviewed regarding the benefits gained by the TEI students and faculty on PAFTE-Cavite activities, problems encountered in terms of these activities, and the areas to improve on and their recommendations for such improvement. The officers interviewed were the active members of PAFTE-Cavite Chapter. Aside from these officers, the secretary of the former dean of the College of Education (COE), DLSU-D was also interviewed since she was the key person who has contacts with all the member schools.

FINDINGS AND DISCUSSION

PAFTE is a network of caring and competent teacher educators and is a prime mover for quality teacher education. It is a learning community of teacher leaders engaged in continuing education, innovations, and scholarly works. It is an advocate of the teaching profession and a prime mover for national development (PAFTE, 2008).

PAFTE as an organization has the following objectives:

1. To promote and maintain unity, professionalism, and excellence among teacher educators, TEIs, and professional teachers;
2. To raise and maintain standards of teacher education and enhance the nobility of the teaching profession through effective leadership and enlightened fellowship;
3. To stimulate, support, and undertake researches, and other scholarly works and innovation that will contribute to the improvement of teacher education;
4. To disseminate new knowledge, information, and materials through publications, seminars, workshops, lectures, conferences, and other forms of continuing professional education activities; and
5. To serve as partner of the Philippine Government in promoting_national development through preservice and in-service teacher education.

Membership in the PAFTE is through the regional PAFTE organization. The PAFTE is present in all the 17 regions (Regions 1, 2, 3, 4A, 4B, 5, 6, 7, 8, 9, 10, 11, 12, 13, NCR, CAR and ARMM) of the Philippines. Each region has a complete set of officers and adopts the national PAFTE constitution. Any member should belong to the regional chapter.

At the DLSU-D, the faculty members and administrators of the College of Education (COE) are all members of PAFTE Region IV-A, the university being part of the CALABARZON area. On 24-25 July 2003 during the PAFTE's 8th Annual Regional Convention, the dean of the COE was elected auditor of the PAFTE Region IV-A while two other COE faculty members were, likewise, elected as members of the Board of Directors (published in Newsette, 2003).

In the courtesy call made by the PAFTE Region IV-A officers to the Commission on Higher Education (CHED) Region IV-A Director, Dr. Isabel Inlayo, on 16 June 2004, she discussed the importance of provincial clustering among schools. This concept was in line with CHED's thrust of monitoring higher education in the country's different regions. She recommended that areas for improvement in curricular offerings, identified through self-assessment, be met through the sharing of both material and human resources by schools within the same province (published in Newsette, 2004).

Responding to the challenge posed by the CHED Region IV-A Director, the COE dean called for a meeting of the deans and/or heads of TEIs in Cavite on 27 August 2004. Aside from DLSU-D, this was attended by 11 other TEIs as follows: University of Perpetual Help of Rizal-Molino, Colegio de Salitran, Immaculada Concepion Colleges, Rogationist College, Imus Institute, Southern Philippines Institute of Science and Technology, Philippine Cambridge School, Emilio Aguinaldo College, Cavite State

University-Indang, St. Jude College, and Eulogio "Amang" Rodriguez Institute of Science and Technology-GMA. The presiding officer explained that the meeting was called for to organize a PAFTE provincial chapter, which was in line with the thrusts of CHED IV-A and PAFTE, and to pave the way for the sharing of resources among the Cavite TEIs, thereby further improving the quality of education offered in the said institutions. The said meeting also resulted in the discussion of the following items: involvement of student teachers, seminar-workshop for the faculty and administrators of the TEIs, as well as for the cooperating teachers and principals, memorandum of agreement for the Student Teaching Program, Observation and Participation/Community Immersion, and review center for Licensure Examination for Teachers (LET) in Cavite (reflected in the 27 August 2004 minutes of meeting).

In the preceding meetings called, the membership of the association expanded to include these other schools: Philippine Christian University, Western Colleges, St. Francis of Assisi College, University of Perpetual Help of Rizal-GMA, Cavite State University-Rosario, Cavite State University-Naic, St. Joseph College, Polytechnic University of the Philippines-Maragondon, and Olivarez College, increasing the provincial membership to 21 schools. This was the start of the collaboration of teacher educators in Cavite which resulted in the sponsorship of 11 activities from year 2005 to 2010.

Table 1 reflects the 11 activities that were sponsored by PAFTE-Cavite since its inception in 2004. Five of these activities were specifically for the fourth year Education students aimed to further hone their skills in teaching and managing classroom situations. Three were allotted for the cooperating teachers and principals who helped the TEIs in developing the needed teaching competencies of the future teachers. Two were intended for the faculty members as they were helped in improving their assessment skills and their ability to prepare appropriate syllabi. One was intended for the graduates of these TEIs so that they would be ready to take and pass the board examination. This activity, however, in spite of the good number of attendees as reflected in the attendance sheet, was not repeated. There was also no record on how they performed in the board exam, which could have been the best evaluation for the success of the activity.

Table 1
List of Activities Sponsored by PAFTE-Cavite

Date sponsored	Title of the activity	Participants
8 January 2005	Seminar on "Envisioning Teachers as Agents of Change"	• 4th year Education students • Faculty of Cavite TEIs • Student Teaching supervisors
16-31 May 2005	12-day LET Review Package	• Graduates of TEIs who are not yet LET eligibles
2 September 2005	Forum on the "Standardization of the Student Teaching Program"	• Representatives from the Department of Education-Cavite Province • Deans of Cavite TEIs • Student Teaching supervisors
22 October 2005	Seminar-Workshop on "Guidelines and Deployment of Student Teachers" and "Book Writing and Developing Critical Thinking"	• Faculty of Cavite TEIs • Student Teaching supervisors • Cooperating teachers and principals
18 November 2005	Seminar on "Image and Teaching Skills Enhancement for Global Educators"	• 4th year Education students • Faculty of Cavite TEIs

24 November 2006	Seminar on "The World of Teaching in the Century of Change"	• 4th year Education students • Faculty of Cavite TEIs • Student Teaching supervisors • Cooperating teachers and principals
15 February 2007	LET Workshop with Dr. Leus	• Faculty of Cavite TEIs • Other DLSU-D faculty
4 May 2007	Seminar on "Developing Learner-Centered Course Syllabus"	• Faculty of Cavite TEIs • Other DLSU-D faculty
15 November 2007	Seminar on "Classroom Management"	• 4th year Education students • Faculty of Cavite TEIs
30 May 2009	Orientation to the Cooperating Schools on the Field Study and Practice Teaching Programs of the TEIs (Experiential Learning Courses)	• Cooperating teachers and principals • Faculty of Cavite TEIs
11 December 2009	Seminar on "Understanding by Design (UBD)"	• 4th year Education students • Faculty of Cavite TEIs

It can also be gleaned from the table that the topics for the activities sponsored by the association were relevant to the needs of the participants. However, the number of activities sponsored for each year was not equal and there was a year, 2008, when no activity was done. This was commented on by one of the officers of the association when he was interviewed.

Further perusal of the documents revealed that aside from the activities listed, PAFTE-Cavite also paved the way for the Cavite TEIs to be members of the National Council of Education Deans (NCED) and to attend the workshop it sponsored on the "New CHED Teacher Education Curriculum" held on 27 September 2006. The workshop provided details to current course descriptions and formulated selected course syllabi in the undergraduate areas of specialization of science, mathematics, language, social studies, and special education.

Through the key informant interview, it was pointed out that one major accomplishment of the association was the endorsement of the Department of Education, Cavite Province on the standardization of policies for the Student Teaching Program. This was made possible through a meeting attended by the deans of the Cavite TEIs, the Assistant Schools Division Superintendent and one Division Supervisor from the Department of Education, Cavite Province on 2 September 2005. They agreed on the amount and distribution of the practicum fee paid by the student-teachers. A sample of the MOA for the Student Teaching Program was also drafted. This means that cooperating schools will no longer compare the practices of two or three TEIs who sent their student-teachers for immersion.

Aside from the list of PAFTE activities, the benefits received by the participants were also identified. From the interview conducted with the PAFTE-Cavite officers, it was revealed that the activities sponsored by the association were beneficial to the participants, both students and faculty. Specifically, they enumerated the following as the benefits derived from these activities:

1. PAFTE activities provide opportunities for faculty and students to grow professionally. The various activities keep the faculty members and students abreast with the latest development in the field of education, provide networking and linkages for both faculty and students, provide opportunity for

exchange and adoption of best practices done in other member institutions and serve as the clearing house for coordinating CHED policies with DepEd for better implementation of CHED memoranda regarding teacher education.

2. The faculty members and students were provided updates on the latest issues about the latest trends in education. They were also given the chance to know the latest programs of DepEd and CHED. They were able to meet people who were also in the field of education. Students and faculty got to meet their counterparts from the different teacher education institutions in the province. They were given the opportunity to exchange notes with their counterparts from the different educational institutions as well.
3. The activities of PAFTE-Cavite have brought new life to prospective teachers. Definitely, they have learned a lot not only to renew their commitment to teaching but they also gave different colors to those who are shifting to teaching even if they are not education graduates.
4. Students gained more knowledge regarding new teaching strategies and met new friends from the other TEIs. The faculty members learned new technologies and methodologies from the seminars given by PAFTE-Cavite.
5. Students are more aware of the new trends and new thrusts of the College of Education. They become well-informed after attending the seminar. The faculty members learned different methods and new styles.
6. Students were updated and they learned new information. The faculty members learned new things after they attended the seminar.

In spite of these benefits, the officers were also asked about the issues and concerns that threatened the sustainability of the association. Four of them said that they experienced no problem with the association and its activities. One mentioned about the problem on venue not being able to accommodate all the student-participants. Another one said that there was a time when there were very few attendees, hence, there was an excess in food and hand-outs. The problems mentioned were all due to poor communication among the organizers and the participating schools.

Perusal of the documents also revealed that one of the concerns faced by the association was the irregular attendance of half of its members. From the 21 member schools, usually only 10 were represented in the meetings called. This probably caused the problem in the attendance of the participants since not all were present to disseminate properly the information discussed in the meeting.

When asked about the other areas that the association can strengthen to improve its services to its members, the interviewees gave the following recommendations:

1. PAFTE should continue to provide more activities to upgrade the quality of teacher education in the province and to increase the passing rate of the different member institutions. In this line, it is recommended to involve all TEI representatives in planning annual activities and create various committees to work on the above undertaking;
2. There is a need to have a long preparation, specifying the duties of the officers; and
3. Junior PAFTE membership should be continued.

The recommendations focused on the provision of more activities. This implies the need of the member TEIs for a training program for both their faculty members and students. In relation, to make these activities more successful, there is a need to plan out carefully the activities and to ensure that each officer performs the tasks assigned to him/her. The last recommendation is worthy to consider since the creation of Junior PAFTE, composed of fourth year Education students, paved the way for better camaraderie among the students. Their leadership skills were also honed since they were allowed to work together in some of their activities.

Taking all these things into consideration, the officers were asked if the PAFTE activities are worth continuing. The resounding answer was "Definitely YES, PAFTE-Cavite activities are worth continuing because they serve as an avenue for updating the TEIs in the province of the changes and development in education. Likewise, PAFTE-Cavite serves as a very good partner in preparing the future teachers in facing the challenges of the profession".

SUMMARY

The study showed the growth of PAFTE-Cavite. The various activities sponsored by the provincial chapter have impacted on the training not only of the Education students but also of the Education faculty and the cooperating teachers and principals. They gained new knowledge as they learned updates on the latest developments in the field and they collaborated with each other. This collaboration resulted in a strong partnership among the member schools and produced harmonious working relationships among the faculty and the students. Problems met were very minimal and were easily solved. The association shows a strong leadership but needs more open communication and more support and cooperation from the members. There is a need for the provision of more activities and the revival of the Junior PAFTE membership. All in all, PAFTE-Cavite was able to perform its role as a provider of standardized policies in teacher education in the province and as a sponsor of training programs for teachers and students that equipped them with the necessary competencies, making them more competitive yet retaining their individual personalities.

REFERENCES

Banaga, Jr. G. L. (2009). School consortia in support of private education. A paper presented during the *2009 CEAP National Convention*, Manila, Philippines.

DepEd's indorsements dated 26 September 2005 and 2 December 2005

DLSU-D Newsette issues: 28 July-2 August 2003; 21-26 June 2004; 10-15 January 2005; 1-15 September 2006.

DuFour, R. & Eaker, R. (1998). *Professional learning communities at work: Best practices for enhancing student achievement.* Alexandria, VA: ASCD.

Garmston, R. & Wellman, B. (1999). *The adaptive school: A sourcebook for developing collaborative groups.* Norwood, MA: Christopher-Gordon Publishers, Inc. Retrieved from http://www.pafte.org

Hord, S. (1997). *Professional learning communities: Communities of continuous inquiry and improvement.* Austin, TX: Southwest Educational Development Laboratory, 18-19.

Inger, M. (1993, December). Teacher collaboration in secondary schools. *Center Focus*, (2).

Mora, I. A. (2009). Mendiola consortium. A paper presented during the *2009 CEAP National Convention*, Manila, Philippines.

National Staff Development Council. (2010). *Collaboration skills.* Retrieved from http://www.nsdc.org/standards/ collaborationskills.cfm

Riel, M. & Fulton, K. (2001). The role of technology in supporting learning communities. *Phi Delta Kappan, 82*(7), 518-523.

Slater, L. (2004). Collaboration: A framework for school improvement. Retrieved from http://ucalgary.ca/iejll/ vol8/Slater

LEADERSHIP STYLE TOWARD STRENGTHENING THE STRATEGY OF HIGHER EDUCATION INSTITUTION SUSTAINABILITY

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ABSTRACT

Leadership style used in a higher education institution affects the competence-based performance of the lecturers and the administrative staff. In turn, their performance will affect the institution performance. So, leadership style influences the institution toward strengthening its strategy to sustain higher education. This study examined the transactional and transformational leadership styles toward the lecturers and the administrative staff of STIE Perbanas Surabaya. Transformational leadership was measured using ideal, inspirational, and intellectual stimuli; while transactional leadership was measured using exceptional management and contingency reward. The indicators used to measure the lecturers' performance were on teaching, module, research, civil services, IT, English; while for administrative staff, integrity, service, professionalism, learning, adaptation, documenting, and English were used. The survey involved 32 lecturers and 31 administrative staff. The data were collected using questionnaire and was statistically analyzed using multiple regression. It was found that transformational leadership significantly influenced both the lecturers and the administrative staff, while transactional leadership did not affect both the lecturers and the administrative staff. The implication was that the top management can set strategies of putting motivation of all organization members in the frame of improving their competence thus helping the institution grow and sustain.

Keywords: Transactional leadership, transformational leadership, contingent compensation, management exception compensation

INTRODUCTION

The competition among higher education has been in the form of getting public attention in forward and backward levels. Forward level means the attention from the target market of the university, meaning the point of the university's new students. Backward level means that the universities are also in a competition to get good attention from the industries that will hire the universities' graduates.

The agents in the university that strongly takes important roles are the lecturers, then the administrative staff. Anyhow, the way they perform are strongly affected by the way the leadership cope their effort of works. Lecturers focus on their contribution within the three higher education obligations, namely; teaching and learning, research, and social services. The performance of the administrative staff is also important since their service to the internal customers and other stakeholders strongly support the success of the university operation. Competitiveness of a university can be affected by the accumulative efforts of the lecturers and the administrative staff.

The performance of the lecturers and the administrative staff reflects the efforts that can be developed and encouraged based on their leadership styles as well. The way the top management governs the organization, especially in handling the lecturers and the administrative staff to performa better. Human resource becomes a very important agent for the competitive advantage of a university. The support of lecturers and administrative staff strongly contributes to the university even much better than other assets.

In order to have supporting with their condition, lecturers and administrative staff, leaders must be able to harmonize their way. This refers to the kind of leaderships that are transactional leadership and transformational leaderships. Top management of a university must understand that the success of the university depends on the quality of the human resource. So, they must be able to manage the human resource. When the human resource tends to consider rewards every time they complete work and show performance, then the leadership should be transactional (Pawar & Eastman, 1977).This is appropriate at the early leadership level but when the condition of human resource has been improved by the leaders, they are ready for the transformational leadership. Transformational leadership will give a lot of empowerment and self-belongingness of the staff since their expectation is getting self-esteem and self-actualization (Bass, 1985).

Based on the improvement of the human resource management in university that has been influenced by the quality assurance challenge and information technology, there should be a shift in the kind of existing leadership that affects staff performance. This study is about examining the university's kind of leadership that affects the performance of the lecturers and administrative staff, what kind of leadership affecting their performance.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

Transactional leadership is a leadership that operates the existing system to satisfy the needs of the organization members and focuses on the rewards giving at the positive change of the staff attitude and takes a corrective action when problems and mistakes happen (Pawar & Eastman, 1977). It is a leadership in which the leader's influence is dominating the employees. The staff or employees feel the leader's trust on them, proudness about the leaders, loyalty, and respectfulness to the leaders. Employees are motivated for a better performance and target. This leadership motives staff to be better (Bass, 1985).

Relation Between Transactional Leadership and Performance

Nat sir (2005) explained that in transactional leadership, leaders give rewards to the employees based on the performance gained and hoped by the employees. This kind of leadership can improve the attitude of the staff and vice versa whenever the leaders do not give rewards to the staff. The leaders give rewards that can directly affect the staff's positive attitude. This is not this way when the leaders do not give the rewards. Bass (1990) and Yulk (1998) stated that the relationship between the leaders and the staff can be in the following points:

1. Leaders know the need of the staff and explain to them what they will get when they meet the performance.
2. All efforts of the staff will be compensated with rewards.
3. If personal needs in line with the value of the works or performance, the leaders will respond for the rewards.

Bass in Howell and Avolio (1993) stated that the characteristic of transactional leadership falls to two kinds, namely; contingent reward, and management exception reward. Contingent reward is a reward that is given with a certain requirement set by top management. The requirement is that if the employees

perform well they will be rewarded, and vice versa. Management exception reward refers to similar idea as contingent reward requiring certain conditions to get reward.

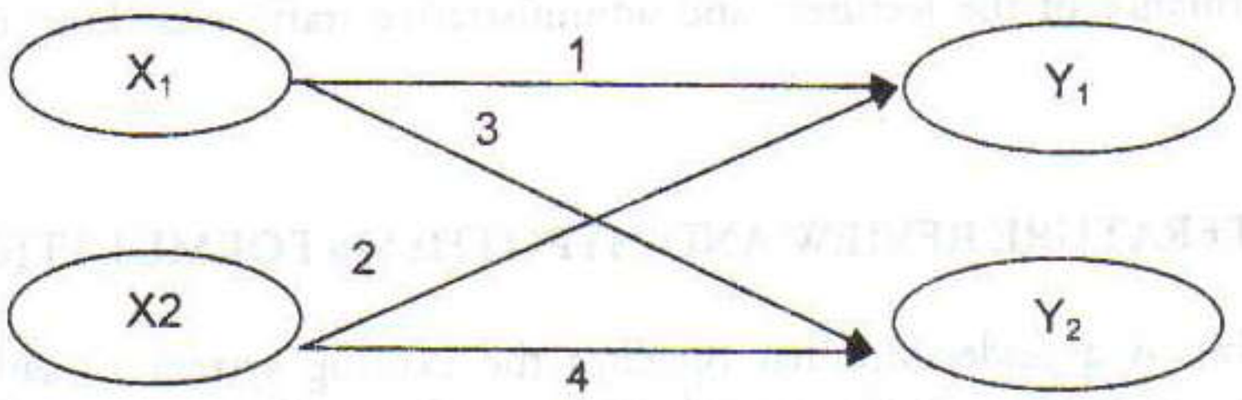
Relation Between Transformational Leadership and Performance

The relationship between leaders and the staff will be good if the staff appreciate and support the leaders. This situation will be a very good point for the leaders to encourage better contribution of the members to the organization. Further, the leaders can control in a better way since the situation happening is conducive for a better moves forward to the staff area of work.

Podsakoff et al. (1996) stated that transformational leadership is very important to influence the attitude, perception, and motivation that can increase the trust of the staff to their leaders. Burn (1978) stated that transformational leadership is a leadership that can give inspirational stimulus and intellectual stimulus. Thus, transformational leadership can also affect the attitude and performance of the staff.

Referring to the above theories, the hypotheses were:

1. Transactional leadership positively affects the performance of lecturers.
2. Tranformational leadership positively and significantly affects the performance of lecturers.
3. Transactional leadership positively and significantly affects the performance of administrative staff.
4. Transformational leadership positively and significantly affects the performance of administrative staff.



The model was explained in the following equations:

$Y1 = \alpha + 0.098\ X1 + 0.042\ X2 + e...$ (1)

$Y2 = \alpha + 0.228\ X1 + 0.040\ X2 + e...$ (2)

Note:
X1 Transactional Leadership
X2 Transformational Leadership
Y1 Lecturer Performance
Y2 Administrative Staff Performance

RESEARCH DESIGN

The variables of this research were Transactional Leadership and Transformational Leadership as independent variables and Lecturer and Administrative Staff Performance as dependent variable. Transformational leadership was measured using ideal, inspirational, and intellectual stimuli; while transactional leadership was measured using exceptional management and contingency reward. The measurement elements for lecturers included teaching, module, research, civil services, IT, English; while for administrative staff were integrity, service, professionalism, learning, adaptation, documenting, English.

The population was all lecturers and administrative staff of STIE Perbanas Surabaya (the college). By taking all respondents from the population, this means that this study used complete enumeration. The data was analyzed using multiple regression.

ANALYSIS AND DISCUSSION

Table 1 shows the influence of transactional leadership (X1) and transformational leadership (X2) toward the lecturers' performance (Y1). The probability score of the inluence of X1 toward Y was 0.098 that was higher than 0.05 as the maximum score of acceptance. This means that the transactional leadership did not significantly affect the lecturers' perfomance. While the probability score of the inluence of X1 toward Y1 was .042 lower which means that transformational leadership significantly affected the performance of the lecturers.

Table 1
The Statistical Result on Lecturers

Variable	Adjusted *R* square	*R* square	Prob.	Result
Transactional leadership (X1) → lecturers performance (Y1)	.089	.148	.098	Not significant
Transformational leadership (X2) → lecturers performance (Y1)	.082	.111	.042	Significant

It is mentioned by Natsir (2005) that if transactional leadership sets compensation in line with the staff's performance and expectation, it can improve the staff's attitude, and vice versa. In this situation, a leader must set rewards that can increase the staff's performance. The staff thinking that they have accepted rewards in line with their performance will compensate it with better work attitude. This study showed that transactional leadership did not significantly affect the lecturers' performance while transformational leadership did. Correspondingly, transactional leadership is not appropriate to be applied in a university or college where the members are lecturers. Lecturers are intellectual individuals that need inspirational leadership. They need management that accomodate them to extensively develop by themselves. Their satisfaction is when they perform well and show their actualization.

The research result showing the influence of transaction leadership (X1) and transformational leadership (X2) on the performance of the administrative staff is shown in Table 2. It was found that the tranformational leadership did not significantly affect the administrative staff's perfomance ($p > .05$). While the transformational leadership significantly affected the performance of the administrative staff ($p < .05$).

Podsakoff, et al. (1996) and Cox (2001) stated that transformational leadership was the drive to influence attitude, perception, and motivation. Burn (1978) stated that transformational leadership was a leadership in which the leader was able to give ideal stimulus, inspirational stimulus, and intellectual stimulus. Burn's research showed that the higher the level of the transactional and transformational leaderships, the better the performance of the staff, and vice versa. The result of this research supported this study that transformational leadership affects the performance of lecturers and administrative staff. This means that leaders in higher education institutions should be more transformational. Transformational leadership fits to strengthening strategy of higher education institution sustainability. This is because transformational leadership can improve organization and empower the organization member. Referring to the hierarchical

need of Maslow, the lecturers and the administrative staff have already been at the need of self-esteem. At this level, it is hoped that the lecturers and the administrative staff will have better performance since they are motivated by the moves of the leaders that always show ideal spirit. The inspirational stimulus given by the leaders orally, by showing positive attitude and behaviors, can help the staff build positive culture for the whole organization in the long run. Transformational leadership is also in line with intellectual stimulus to show how they should think and find problem using better perspective. These stimuli are hoped to be shown by the leaders in education organization. If all members or the organization are positively affected by the transformational leadership, then they will have open mind to accept changes and improvement; that they will help a lot to the growth and sustainability of the organization.

Table 2
The Statistical Result on Administrative Staff

Variable	Adjusted *R* square	*R* square	Prob.	Result
transactional leadership (X2) → performance administrative staff (Y2)	.036	.100	.228	Not significant
transformational leadership (X2) → performance administrative staff (Y2)	.065	.096	.040	Significant

CONCLUSION

Transformational leadership affects the performance of the lecturers and the administrative staff. At higher education institution level, leaders should employ transformational leadership since this is in line with the substance of the business that in turn can strengthen the organization's sustainability.

REFERENCES

Alwi, S. (1988). *Perencanaan Sumber Daya Manusia*. Tesis Program Magister Manajemen. Univertas Islam Indonesia.

Al-Khalifah, A.K., & Peterson, S.E. (2004). On the relationship between initial motivation, satisfaction and performance in joint ventures. *European Journal of Marketing, 38*, 150-174.

Arnold, H. J., & Fieldman, D. C. (1982). A multivariate analysis of determinant of job turnover. *Journal of Applied Psychology, 67*(3), 350-60.

As' ad, M. (1984). *Kepemimpinan Efektif dalam Perusahaan*, Yogyakarta: Liberty.

Bass, B. M. (1985). *Leadership and Performance beyond Expectation.* New York: Free Press.

Bass B. M., & Avoid, B. (1994). *Improving Organizational Effectiveness through Transformational Leadership.* Sage: Thousand Oaks, SA.

Bernadin, H.J& Russell, J.E.A. 1998. *Human Resource Management* (2nd ed.). New York: McGraw-Hill Inc.

Bluedorn, A.C. (1982). A unified model of turnover from organization. *Human Relations,* 52(2), 135-53.

Burns, A. (1992). *Charisma and leadership in organization.* London : Sage.

Dessler, G. 1997. *Human resource management* (7th ed.). New Jersey: Prentice Hall Inc.

Drake, A. R., Wong, J., & Salter, S. B. (2007). Empowerment, motivation, and performance: Examining the impact of feedback and incentives on non-management employees. *Behavioral Research in Accounting, 19*, 71-89.

Gibson, J. L., Ivancevich, J. M., & Donnelly, J. H. (2000). *Organizations.* (10th ed.). New York: McGraw-Hill Inc.

Gomes, P. J. (1997). *The good book.* Boston: Compass Press.

Greenberg, J. (1999). *Managing behavior in organizations, science in service to practice.* New Jersey: Prentice Hall.

Hersey, D. C., & Blanchard, K. H. (1992). *Management of organizational behavior utilizing human resource* (3rd ed.). New Jersey: Prentice Hall International Inc.

Ikhsan, A., & Ishak, M. (2005). *Akutansi Keprilakuan.* Jakarta: Penerbit Salemba Empat.

Indrianto, N. & Supomo, B. (1999). *Metodologi penelitian bisnis untuk akutansi dan manajemen.* Edisi Pertama Yogyakarta: BPFE Yogyakarta.

Lekatompesy, J. E. (2003). *Hubungan profesionalisme dengan konsekuensinya : Komitmen organisasional, kepuasaan kerja, prestasi kerja, dan keinginan berpindah . Kalian Basins,* 05(1), 69-84.

Luthans, F. 1985. *Organizational Behavior,* (7th ed.). New York: McGraw Hill.

Morris, J. H., & Steers, R. M. (2004). Structural influence on organizational commitment. *Journal of Vocational and Occupational Psychology.* New York: academic Press.

Mustopadidjaja, A. R. (2005). *Beberapa dimensi dan dinamika kepemimpinan abad 2.*

Natsir, S. (2005). *Pengaruh Gaya Kepemimpinan Transaksional dan Transformasional terhadap Perilaku Kerja dan Kinerja Karyawan Perbankan di Sulawesi Tengah.* Fakultas Ekonomi Universitas Tadulako.

Pawar, B.S, and Eastmen, K.K. 1997. The nature and implications of contextual influences on transformational leadership: A conceptual examination. *Academy of Management Review, 22,* 80-109.

Rivai, H. A., & Pramusinto. (2005). Pengaruh motivasi, komitmen organisasi, kompetensi terhadap indivdual. *13*(3), 272-286.

Scholtes, P. R. (2001). Perilaku kepempinan transformational dan pengaruhnya terhadap budaya organisasi. *Staff Pengajar Universitas Gadjah Mada. 10*(1).

Staw, B. M. (1991). *Psychological dimensions of emotion in organization.* New York: Maxwell MacMillan.

Uchjana, O. E. (1979). *Human relation dan public relation dalam manajemen.* Alumni Bandung.

Wahjosumidjo. (1997). *Kepemimpinan dan motivasi, cetakan ketiga. Jakarta* : Graha Indonesia.

Wentzel, K. (2002). The influence of fairness perceptions and goal commitment on managers performance in budget setting. *Behavioral Research in Accounting, 14*, 247-259.

Williams, L. J, & Hazer, J. T. (1986). *Antecedents and consequences of satisfaction and commitment in turnover models: Analysis using latent variable structural equation method. Journal of Applied Phsychology,* 71(2), 219-231.

Wright, P. M. (1992). *An examination of the among monetary incentives, goal level, goal commitment and performance. Journal of Management,18,* 677-695.

STRATEGIC ALLIANCE OR SOCIAL NETWORKING: A CASE STUDY OF SOUTH EAST ASIAN ASSOCIATION FOR INSTITUTIONAL RESEARCH

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ABSTRACT

Strategic Alliance (also referred to as "cooperative agreements", "cooperative linkages" and "corporate partnering") is widely used as a strategic choice between firms to capitalize on synergies to dominate a market space. These alliances are built on financial remuneration, goods and services, information, or a combination of the three. Social Networking, as applied in the field of mentoring, is built on strength and diversity (Gray, 2004). Four types of social network identified by Higgins and Kram (2001) are focused on the strength and diversity of "developmental network". Success in social networks is dependent on Social Capital (MacMillan, 2006) which is the soft side of an effective organization that underlies informal networks, accumulated know-how, mutual understanding and trust. Pisano and Verganti (2008) developed a framework based on the openness and hierarchy dimensions to determine and select the appropriate collaborations options that an organization can select. The key research question, using SEAAIR as a case study, is "What collaboration framework, strategic alliance, or social networking is appropriate for SEAAIR?" The research design will be based on secondary research into the theories and practices of strategic alliance and social networking, an appropriate networked alliance based on the framework of Pisano and Vergant. A set of recommendations of the best practices of both strategic alliance and social networking to support the selected networked alliance for SEAAIR is identified.

Keywords: Strategic alliance, social networking, social capital

INTRODUCTION

Everyone is connected everywhere and every time. No one lives in isolation anymore. Businesses and organizations, profits or nonprofits, public or private cannot survive in the present day knowledge based and connected world. Profit making organizations are collaborating in various forms, especially strategic alliance to collaborate and dominate the market space. Nonprofit making and public organizations are also beginning to collaborate. There are instances of success in the business organizations based on strategic alliance, but would this work for nonprofit-oriented and regional organizations that are committed to the development of society but does not have vast resources. Is there an alternative for these types of organizations?

Much has been researched and written about strategic alliance, but what would be an appropriate format for those that are used for collaborations inter and intra nonprofit organizations. This paper aims at looking at the alternative of social networking for a community- and regional-based organization through

the use of the case of SEAAIR (South East Asian Association for Institutional Research) for its collaborative actions and activities in research through the sharing and dissemination of research and knowledge. This is in lieu of the norms of a strategic alliance form and format that ARE widely used in the business organizations.

REVIEW OF RELATED LITERATURE

Strategic alliance. Strategic alliance, as used widely in the business arena is variously called cooperative agreements, cooperative linkages, collaborative agreements, corporate partnering, or strategic partnerships between firms. Basically, they are defined as any long-term explicit agreement between two or more firms that involves financial remunerations, goods and services, information, or a combination of the three (Gompers, 2001). Transaction cost theory (Williamson, 1975, 1979, and 1985) explained that a transaction occurs when a good or service is transferred from one party to another, and the cost increases when the number of transactions increases as there is a cost for each transaction.

The key motivational factors for forming strategic alliances include: information exchange, complementary resources, economies of scale, and international expansion. Some of these forms of strategic alliances are R & D licensing agreement and joint venture.

The success of the alliance is based on the soft capital of the organization. Social capital is the "soft" side of business (MacMillan, 2006). The "soft side" includes the informal networks, accumulated know-how, mutual understanding, and trust that make the organization effective. This effectiveness is due to the trust factor to reduce conflicts, empowering lower levels employees to allow faster problem solving that brings about job security, thus helping the organization to enjoy leadership and low turnover. Cargill, where MacMillan is Chairman Emeritus, managed its soft capital through: (a) recruiting – hiring for aptitude and attitude; (b) training by using an apprentice system; (c) organizational values by walking the talk; (d) networking through creating opportunities for people to share ideas; (e) decision making through adopting common processes; (f) employment through making a long-term commitment; (g) with senior management keeping in touch with the field; and (h) all working with a singular purpose.

Other than the soft capital of the organization that can affect the success of the organization, Whipple and Frankel (2010) attributed one of the success factors as trust which is composed of: (a) character-based trust of the partners' philosophies and culture (including integrity, motives, consistencies of behavior, openness, and discreteness); and (b) competence-based trust which covers specific operating behaviors and day-to-day performance covering specialized operational knowledge and skills, interpersonal competence, competence in business, and judgment (Gabarro, 1987). Other success factors included senior management support, ability to meet performance expectations, clear goals, and partner compatibility. Bernhut (2002) recommended that after the deal, four keys to managing the alliance are: (a) making the alliance as a core capability; (b) build and manage trust; (c) audit the relationship; and (d) develop a protocol for joint decision making.

Social networking. Social networking, based on the network diversity and relationships, has been used in the field of mentoring called "developmental network" (Gary, 2004). Depending on the diversity and the strength, there are 4 types of network (Higgins & Kram, 2001): Entrepreneurial network (where diversity and relationship is high), opportunistic network (with high diversity and low relationship), traditional network (low diversity but strong relationship), and receptive networks (have low diversity and relationship). The relationship is dependent on the "tie strength" which can be assessed through its reciprocity, connectedness, cohesion, and degree of trust and interpersonal intimacy of the relationship (Pfeffer, 2008).

Alliance or collaborations or partnership works on a collective group of knowledge workers who are often posed with issues or problems which are normally complex and ill-defined with a short time horizon to come up with a solution or decision. It is dependent on dynamic interactions of people, rather than just database silos that require context definition, framing, and evaluation of solutions and convincing others of the solutions (Brown & Duguid, 1991; Cross & Sproull, 2004). Informal networks are critical of knowledge transfer and diffusion of ideas and innovations (Allen, 1977 and Rogers, 1995). The central role of informal networks has led to the 2nd or 3rd wave of knowledge management (Argote, 1999; Borgatti & Cross, 2003) that emphasized technical and organizational initiatives to promote collaborations (Huysman & de Wit, 2004). These informal networks have become powerful "CoP - communities of practices" that can be used to leverage the capacities and capabilities of the internal and informal communities of people within an organization for sharing of knowledge and leveraging of knowledge to advance the organization (Wenger, McDermott & Synder, 2002; Saint-Onge & Wallace, 2002).

To check whether these communities of practice that has myriad of relationships contribute to or hinder community effectiveness, Cross et al. (2006) recommended the use of SNA (Social Network Analysis) to determine five areas of value addition in:

1. Improving information flow and knowledge re-se;
2. Developing an ability to sense and respond to key problems or opportunities;
3. Driving planned and emergent innovation;
4. Nurturing value – creating interactions; and
5. Engaging employees through community efforts.

Cross et al. (2006) research showed that the CoPs are normally voluntary groups with no reporting structures or accountabilities and are usually composed of geographically dispersed people. Cross, Borgati, and Parker (2002) also proposed the use of SNA to assess the patterns of relationships that could reveal interesting and actionable areas to value addition in:

1. Promoting effective collaborations within a strategically important group;
2. Supporting critical junctures in networks that cross functional, hierarchical, or geographical boundaries; and
3. Ensuring integration within groups following strategic restructuring initiatives.

Strategic alliance vs. social networking for a community based service organization. Collaborations are essential and critical for the functioning of an organization and its members. The degree of effectiveness and success is dependent on the relationships between two units of the human factor within and outside of the organizational unit which is the social capital of the organization (MacMillan, 2006). Regardless of the form and format of the collaborative actions, strategic alliance and social networking work under the key tenets of trust (Gary, 2004; Higgins & Kram, 2001; Pfeffer, 2008), both the character-based and competence-based (Whipple and Frankel, 2010). This trust is also the fundamental of empowerment and in knowledge management (Argote, 1999; Borgatti & Cross, 2003; Wenger, McDermott, & Synder, 2002; Saint-Onge & Wallace, 2002) within the collaborative units that advance the organizational goals (Brown & Duguid, 1991; Cross & Sproull, 2004).

Since the collaborative efforts of the human factor in the organization are a "soft factor", the premise for the establishment of collaborations should be based on the maximization of the effectiveness of the social capital within the organizational units. This paper's key research question is "What collaboration framework, strategic alliance, or social networking is appropriate for SEAAIR?", which is a regional collaboration of academics, the identification of an appropriate "form and format" would be based on the

framework of Pisano and Verganti (2008). The determination of the appropriateness of a set of collaborative organization is based on the two dimensions of "governance" and "participation".

CASE STUDY PROFILE OF SEAAIR

SEAAIR is a regional collaboration of academics with a focus on Institutional Research in ASEAN. It is a regional chapter or sister affiliate of AIR (Association for Institutional Research) in the US which is the main umbrella organization. As a regional collaboration of ASEAN academics and researchers, it is not a profit-based organization and is community service centric. In a true sense, it is a loosely bound association based on mutual contributions of the regional academics to forward the institutional research efforts in the ASEAN region. An executive board (SEC–SEAAIR Executive Committee) is elected every three years to manage the SEAAIR affairs. An annual general meeting is held at the end of the annual conference. The main role of the SEC is to manage the affairs and the running of the association based on the association charter promulgated in 2000.

SEAAIR, as an association similar to that an organization CoP (Communities of Practices) (Cross, et al., 2006; Wenger, McDermott & Synder, 2002; Saint-Onge & Wallace, 2002) has the following characteristics which are:

1. A nonprofit association that is not registered for business purposes but is aimed at community service through knowledge research and sharing;
2. A collaborative efforts of academic and researchers to promote institutional research and community service in the region;
3. An annual conference to promote the institutional research efforts and an annual general meeting to discuss the SEAAIR's affairs with its general members; and
4. SEC (Executive Committee of SEAAIR) who are elected every three years by the general members at the AGM to manage the affairs of SEAAIR and run the day-to-day affairs of SEAAIR and represent all SEAAIR general members.

Based on the characteristics above, SEAAIR, which is a nonprofit association that is not registered for business purposes but is aimed at community service through knowledge research and sharing, is a loose and free form of collaboration of academics. As such, the strategic alliance format, typical of a business organization for profit and goods and service with an economic transactions cost could be ruled out as an association format for SEAAIR.

Using Pisano and Verganti's two dimensions of collaboration mode of "participation" and "governance" (Figure 1), SEAAIR meets the "flat governance and open participation" attributes. This is also supportive of organizational characteristics of the collaborative actions of high diversity and low relationship (Higgins & Kram, 2001) with a low "tie strength" (Pfeffer, 2008), that is found in SEAAIR. As such, a recommended mode of collaboration for SEAAIR would be the "Innovation Community".



Figure 1: How to Choose Best Mode of Collaboration

Source: Pisano, G.P. and Verganti, R. (2008), What Kind of Collaboration is Right for you?, Harvard Business Review, December 2008.

SOCIAL NETWORKING: CASE OF SEAAIR

To answer the key research question "What collaborative model would be applicable to SEAAIR?", the strategic alliance model can be ruled out as the literature has indicated that strategic alliance would be more business- or profit-oriented, with a focus on the collaborative cost transactions of goods or services (Gompers, 2001; Williamson, 1975, 1979, and 1985). But this does not mean that a loose form of the Strategic Alliance that is "not the norm of the business oriented model" cannot be adapted for the non-profit focused collaborations. Alliances or networking success are based on trust (Gary, 2004; Higgins & Kram, 2001; Pfeffer, 2008) and information exchange. This is the foundation of which successful relationships are built on. It is noted that trust is a key fundamental of empowerment and in knowledge management (Argote, 1999; Borgatti & Cross, 2003; Wenger, McDermott & Synder, 2002; Saint-Onge & Wallace, 2002) within the collaborative units that advance the organizational goals (Brown & Duguid, 1991; Cross & Sproull, 2004) which exist in strategic alliance and social networking.

As also noted earlier, the "Innovation Community" could be elaborated through Figure 2, whereby there is a network of academics, researchers, and professionals who are in the business of knowledge exploration, knowledge research, knowledge creation, and knowledge sharing. This knowledge is based on the data, facts, and information that are analyzed and discoursed within the community. This is the modus operandi of SEAAIR as the core of the group in the analysis, discourse, dissemination and sharing of the information across its various outreach groups: (a) regional sister AIR affiliates of AIR, Dutch AIR, EAIR,

SAAIR, MENA-AIR, AAIR, CIRPA and PAIR; (b) Regional official bodies like AEH, AUN, SEAMEO-RIHED, ASAIHL and AUAP, 3) universities; and (c) the SEAAIR members in ASEAN. All these CoPs are the four main direct links social networked with SEAAIR as the hosting network in promoting effective collaborations within a strategically important group and in supporting critical junctures in networks that cross functional, hierarchical or geographical boundaries, and ensuring integration within groups following strategic restructuring initiatives.

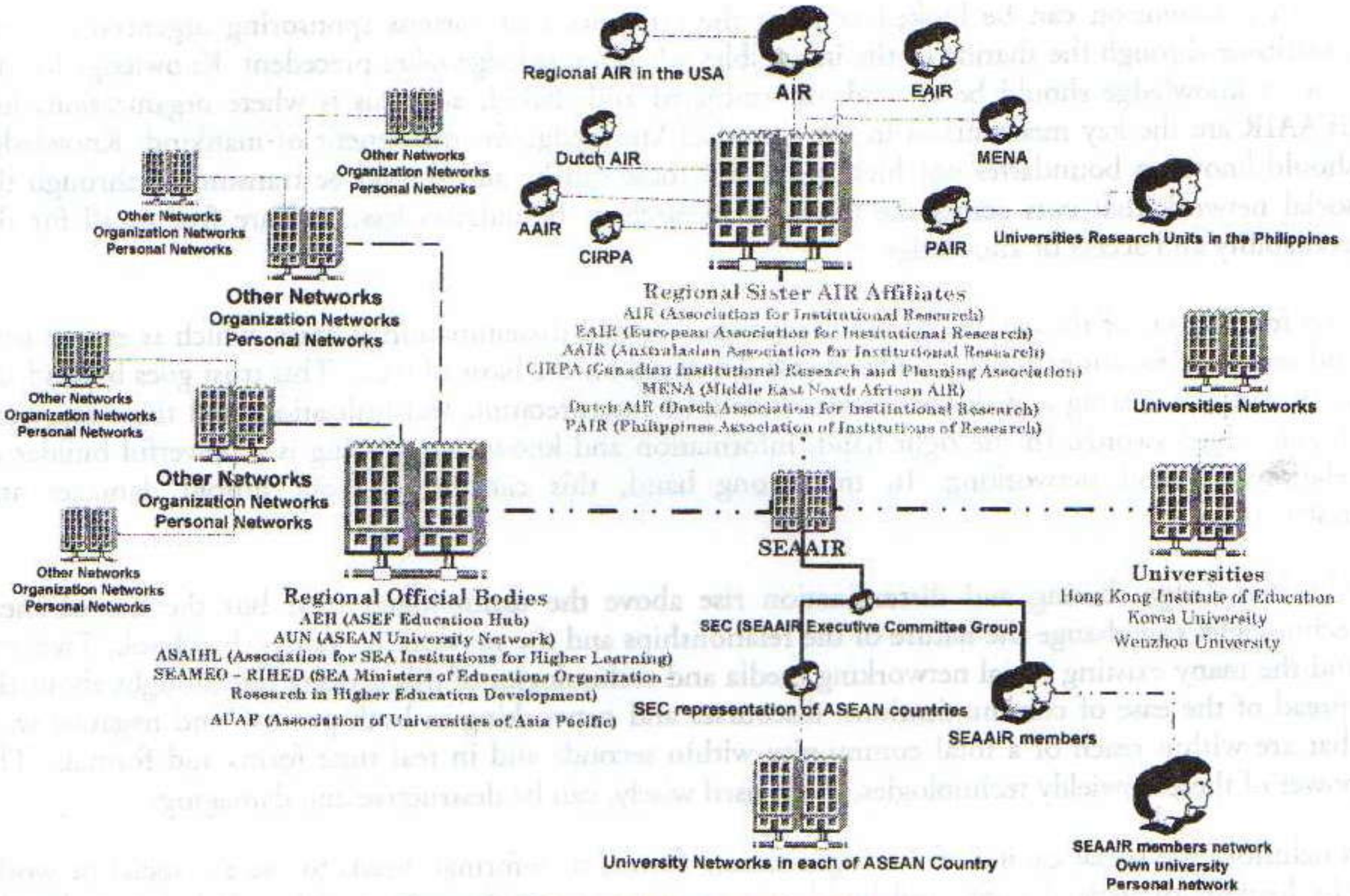


Figure 2: Social Networking: A Case study of SEAAIR

Borgati and Parker (2002) noted that the social networking nodes activate the value additions across the member affiliates and their corresponding and appending networked agents. This could lead to better sharing of potential scare resources and more synergies across the different contributions by their member universities or bodies that they are affiliated to. In this case, SEAAIR acts as the host of the "Innovation Community" that serves as the collative and disseminative agent in the free flow of shared data, information and knowledge.

IMPLICATIONS AND CONCLUSION

It is an accepted fact that in this knowledge-based economy that are interconnected and wired through different and advanced technologies that knows no end, the whole world is within the reach of a single button. But the success in the sharing and dissemination of data, information, or knowledge is based on trust (Whipple & Frankel, 2010; Gary, 2004; Higgins & Kram, 2001; Pfeffer, 2008) and the availability and accessibility of the information. Trust is built on information, and without trust, information will never be disseminated and shared. In the innovation community, SEAAIR is a community service association that encourages and shares research and knowledge through the networking of the social capital of the different organizations and establishments. It is built on a foundation of trust and empowerment (MacMillan, 2006) which is the key to networking success. Some of the implications are:

1. A loose form of strategic alliance in the form of the social networking matrix as discussed above and as applied to nonprofit organizations or community service organizations can work in the interest of society and can share through the "pooling" of scarce resources. Financial resources and the attached risks are spread across the different sponsoring organizations to which the networked members are affiliated to, and this could lessen the burden of the hosting networked node.

2. Another dimension can be looked at from the synergies that various sponsoring organizations can contribute through the sharing of the intangibles where knowledge takes precedent. Knowledge for the sake of knowledge should be created, disseminated and shared, and this is where organizations like SEAAIR are the key mechanisms in the spread of knowledge for the benefit of mankind. Knowledge should know no boundaries nor hierarchies and these can be and should be transmitted through the social network that cuts across the layers of hierarchies, boundaries less, and are free to all for the availability and access of knowledge.

3. The foundation of the success of knowledge sharing and dissemination is trust, which is ever elusive and sensitive. Relationships are built on and destroyed on the basis of trust. This trust goes beyond the realms of just sharing and dissemination, but in its interpretation and utilization, and these represent double-edged swords. In the right hand, information and knowledge sharing is a powerful builder of relationships and networking. In the wrong hand, this can bring about untold damages and destructions.

4. The knowledge sharing and dissemination rise above the technologies used but the use of these technologies can change the nature of the relationships and the networking values. Facebook, Twitters, and the many existing social networking media and technologies of this century has brought about the spread of the ease of communications, discourses and networking in both positive and negative ways that are within reach of a total community within seconds and in real time forms and formats. The power of these unwieldy technologies, if not used wisely, can be destructive and damaging.

In conclusion, the social capital of the organization, formal or informal, needs to use the social networks for the benefits of societal needs and build of a stronger society. It is the social capital that wields the unwieldy power of the technologies used in the social networking. Ultimate responsibilities and accountabilities lie with the social capital in the interpretation and utilization which is based on trust to use these social networks to build and share knowledge honestly and with transparency and integrity.

REFERENCES

Argote, L. (1999). Organizational learning: Creating, retaining and transferring knowledge. Boston, MA: Kluwer Academic Publishers.

Bernhut, S. (2002). After the deal is done: Four keys to managing an alliance. *Harvard Business Review*, 3–4.

Borgatti, S. P. & Cross, R. (2003). A relational view of information seeking and learning in social networks. *Management Science, 49*(4), 432–445.

Brown, J. S. & Duguid, P. (1991). Organizational learning and communities to practice: Toward a unified view of working, learning, and innovating. *Organization Science, 2*(1), 40–57.

Cross, R., Laseter, T., Parker, A. & Velasquez, G. (2006). Using social network analysis to improve communities of practice. *California Management Review, 49*(1), 32–60.

Cross, R. & Sproull, L. (2004). More than an answer: Information relationships for actionable knowledge. *Organization Science, 15*(4), 446–462.

Cross, R., Borgatti, S. P. & Parker, A. (2002). Making invisible work visible: Using social network analysis to support strategic collaborations. *California Management Review, 44*(2), 25–46.

Gabarro, J. J. (1987). The development of working relationships, in J. W. Lorsch (ed). *Handbook of organizational behavior.* Englewood Cliffs, NJ: Prentice Hall.

Gary, L. (2004). The next ideas: The science of networking. *Harvard Business Review, 3.*

Gompers, P. A. (2001). A note on strategic alliances. *Harvard Business Review*, 1–10.

Higgins, M. C. & Kram, K. E. (2001). Reconceptualizing mentoring at work: A developmental network perspective. *The Academy of Management Review, 26*(2), 264–288.

Huysman, M. & de Wit, D. (2004). Practices of managing knowledge sharing: Towards a second wave of knowledge management. *Knowledge and Process Management, 11*(2), 1477–1490.

MacMillan, W. (2006). The power of social capital. *Harvard Business Review*, 1–5.

Pfeffer, J. (2008). *A note on social networks and network structure.* Stanford Graduate School of Business, Case OB – 66.

Pisano, G. P. & Verganti, R. (2008). What kind of collaboration is right for you? *Harvard Business Review*, 1–9.

Rogers, E. (1995). Diffusion of innovations (4th ed.). New York: NY Press.

Saint-Onge, H. & Wallace, D. (2002). Leveraging communities of practice for strategic advantage. Burlington, MA: Butterworth – Heinnemann.

Wenger, E., McDermott, R. & Synder, W. (2002). Cultivating communities of practice: Learning, meaning and identity. Boston, MA: Harvard Business School Press.

Whipple, J. M. & Frankel, R. (2010). Strategic alliance success factors. *Journal of Supply Chain Management.*

Williamson, O. E. (1975). Markets and Hierarchies, New York: Free Press.

Williamson, O. E. (1979). *Transaction cost economies: The governance of contractual relations. Journal of Law and Economics, 22*, 233–261.

Williamson, O. E. (1985). *The economic institutions of capitalism.* New York: Free Press.

THE EXTENT OF ACADEME-INDUSTRY COLLABORATION IN RESEARCH IN NEGROS OCCIDENTAL: BASIS FOR ENHANCEMENT

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ABSTRACT

The study aimed to determine the academe-industry collaboration in research of state colleges and universities and industries in Negros Occidental for AY 2007-2008 as basis for enhancement. It further aimed to ascertain the profile of SUCs and industries and hindrances towards collaboration in research. The study utilized the descriptive research, using AACCUP and researcher-made questionnaire. The mean and *t* test were employed in the analyses of data set at.05 level.

The findings revealed that the research agenda of SUCs is within the priorities of agencies and industries. However, linkages with research agencies for funding support have not been established and hindrances to collaboration are inadequate research information dissemination, training, and absence of incentives. Very few personnel in the industry sector were engaged in research and development activities and few industries allocate funds for research and development. The status of collaboration is moderate, however, sharing of resources and training are deem important to sustain research linkage. It is recommended that SUCs should endeavor to establish strong linkage with the industry, allocate funds and resources, and strengthen human resources capability. Report on research and development activities of SUCs and industries should be made available to the intended "users of research".

Keywords: Academe-industry collaboration, industries

RATIONALE

Science and technology have been recognized through the years as the key factors in making a nation economically and globally competitive. The importance of research and technology development is in fact enshrined in the 1987 Philippine Constitution. Article XIV, Sec. 10 declares that: "Science and technology are essential to national development and progress. The State shall give priority to research and development, invention, innovation, and their utilization; and to science and technology education, training, and services. It shall support indigenous, appropriate, and self-reliant scientific and technological capabilities, and their application to the country's productive systems and national life".

Clearly, the constitution itself pushes for widest participation in technology development. Department of Science and Technology (DOST) Secretary Estrella Alabastro of the Philippines, further postulates that the larger part of investments on science and technology, particularly research and development, still comes from the government. This is not enough, though, to fill the increasing need for resources to support research and development. Consequently, collaboration among various sectors is looked upon as a means of solving the constraints of limited resources.

Basically, one of the functions of State Colleges and Universities (SUCs) is research and it would be advantageous if other funding sources could augment the research support given by the government. One possible source of funds is the industry, hence, it is important that the academe collaborates with the industry. The academe can provide the industry with the needed human resources like the researchers, statisticians, and others. It can, likewise, share its facilities and equipment. The academe can also lend its expertise in preparing research proposals, feasibility studies and other research requirements. On the other hand, the industry, which will eventually be benefited by the research output, can provide information on current trends, facilities and equipment, technical assistance, and financial support to the academe. Recognizing the importance of academe-industry collaboration in research and its contribution to economic growth, this study was undertaken to determine its status in Negros Occidental and the hindrances to such collaboration. The findings could be used as basis for the enhancement of the collaboration.

RESEARCH METHODOLOGY

The study used the descriptive design. It was conducted during the Academic Year 2007-2008 among the selected SUCs and identified industries in Negros Occidental. Due to the confidentiality of the gathered data, the SUCs will be referred to as SUC A, SUC B, SUC C, and SUC D.

The respondents of this study were the 42 personnel from the academe and the 15 personnel from the industries. The respondents from the academe were the unit heads/research directors, faculty members who are involved in research in selected SUCs in Negros Occidental. On the other hand, the respondents from the industries were the heads of the research office, human resource officers, and their employees who are involved in research. Since not all respondent industries have research and development units, employees who are involved innovation were chosen by their human resource officer to answer the questionnaires. In other words, the purposive sampling was used to select the respondents of the study.

The instruments used were the master survey instrument of the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACCUP) for the accreditation of programs in the area of research and the researcher-made survey questionnaire.

FINDINGS

The following were the findings of the study:

1. Generally, the profiles of the SUCs in Negros Occidental in terms of the following areas of concern are:
   a) The research agenda of SUCs in Negros Occidental is in consonance with the priorities of DOST, Commission on Higher Education-National Higher Education Research Agenda (CHED-NHERA), National Economic and Development Authority (NEDA), Department of Agriculture (DA), and the industry. On the other hand, industry representatives have the least participation in the formulation of the research agenda.
   b) Most of the research funds and resources utilized by SUCs come from their own budgetary allocations. Linkages with research agencies or industries for funding support have not been established in some SUCs, linkages with local and national industry is mostly in the form of on the job training of students.
   c) The research results and outputs of SUCs in Negros Occidental were utilized as inputs to institutional development, improvement of instructional processes and technology development. On the other hand, generated technology had been transferred to the community to improve agricultural productivity and there was no mechanism to ensure that research results are protected by IPR Laws.

d) SUCs in Negros Occidental provided avenues for the dissemination of research results such as fora, conferences, faculty seminars, and other communication media. This was evident in the number of opportunities and support given to the faculty in the presentation of their research outputs in local, regional, national, and international conferences. SUCs in Negros Occidental, likewise, published their research journals regularly and maintained a library exchange of research publications.

2. Generally, the profile of identified industries in terms of the different areas of concerns are as follows:
   a) The identified industries in Negros Occidental have the following lead products and services: food and beverage production, fabrication, repair, maintenance and transportation and very few personnel in the industry sector were engaged in research and development activities.
   b) Few industries allocate funds for the academe and their own research and development activities.

3. The status of academe-industry collaboration in research in terms of sharing of resources and training of personnel was to a moderate extent.

4. SUCs in Negros Occidental did not differ significantly in their perceptions on the status of research in terms of sharing of resources. Significant differences were noted in perceptions of the respondents of the SUCs in Negros Occidental on the status of research in terms of training of personnel.

5. Generally, the biggest hindrances to academe-industry collaboration in research are as follows: inadequate research information dissemination, lack of fundamental and advanced research training to enhance the technology development process, and inadequate or absence of incentives for research.

6. No significant differences existed between the perceptions of respondents as to hindrances to academe-industry collaboration in research in aforementioned areas: sharing of resources and training of personnel.

CONCLUSION

In view of the findings of the study, the following conclusions were advanced:

1. Efforts exerted by the SUCs were not enough to establish a strong linkage with the industry. Much has to be done to attract the interest of the industry to the research activities of the academe. There is a need to involve the industry in the formulation of the research agenda inorder to direct research activities to the needs of the industry thereby, stirring their interest to collaborate with the academe.
2. Very few industries in Negros Occidental conduct formal research activities. Big companies centralize their research and development activities at their main offices which are located outside of Negros Occidental or hire professional researchers to do the research for them. Thus, budget allocation for research and development for industries in Negros Occidental is minimal.
3. Most of the research funds and resources such as facilities, equipment software and other ICT resources utilized by SUCs come from their own budget allocations. Some income generated from the outputs of previous researches was likewise allocated for research. Linkage with research agencies or industries, whether local, national or international, for funding support have not been established in some SUCs. Linkage with local and national industry is mostly in the form of on the job training of students.
4. The SUCs have utilized their research results/outputs as input to institutional development, improvement of instructional processes and technology development and have transferred some of the generated technology to the community. However, not all SUCs have Intellectual Property Rights mechanisms to protect the technology developed.

5. SUCs provide avenues for the dissemination of research results. They also support the faculty in activities related to publication and dissemination of research results.
6. There is a need to train academe and industry personnel in research, upgrade the incentives and improve the dissemination of research information to facilitate academe-industry collaboration in research.

RECOMMENDATIONS

In the light of the research findings and conclusions, the following recommendations are formulated:

For policy: The SUCs in Negros Occidental, through the strong leadership of their research directors, should endeavor to establish strong linkage with the industry and refocus thrusts and priorities in research to respond to the emerging needs of their respective clientele. Research efforts can be done through the allocation of support funds and resources, strengthening of human resource capability between the academe and the industry.

Research personnel of SUCs in Negros Occidental should forge linkage with industrial partners and actively involve themselves in research and development activities to explore opportunities related to needs and problems of the clientele, which are considered the targets of all development efforts of the government. Finally, report on research and development activities of SUCs in Negros Occidental and the identified industries should be made available to the intended "users of research", so that they may be able to improve the culcure and environment for research by enhancing instructional programs and eventually advancing technologies and inventions.

For future research: The present study may be replicated among SUCs in other regions of the country in order to validate the findings of the present study. Future researchers may use the same research instrument to ascertain the academe-industry collaboration and their significant contribution to technological and economic growth in strong alliance with the industries and other sectors.

REFERENCES

Abellana, V. (2007). Academe-Industry Research Partnership. Presented in the *International Conference on Research in Higher Education*, Cebu City on October 24-27, 2007.

Alabastro, E. F (2005). International collaboration in research and development. Keynote address at the *72nd NRCP Annual Meeting.*

Ardales, V. B. (2001). *Basic concept and method in research* (2nd ed.). Iloilo City: Concerns Inc.

Best, J. W. & Kahn, J. V. (1993). *Research in education* (7th ed.). Needham Heights, MA: Allyn and Bacon, A Division of Simon and Schuster.

Chung, S. K. (2001). Academe-industry cooperation: The POSTECH Experience.

Guilford, J. P. (1978). *Fundamental of statistics in psychology and education*. McGraw Hill International.

Hanberger, A, Schild I., & Hamilton, D. (2001). Academy-industry collaboration mid-term evaluation of the knowledge foundation's knowledge exchange programme. Retrieved November 18, 2009, from http://www.kks.se/upload/utvarderingsfiler/academy_ industry_collaboration

Padolina, W. G. (2004). Government-academe collaboration in research and development. Paper presented on the *2004 Annual Scientific Sessions of NRCP.*

Salmingo, R. B. (2002). *Research capability of state educational institutions in Western Visayas.* Unpublished Doctoral Dissertation, West Visayas State University.

Uriarte, F. A. (2004). Industry-university cooperation in research and development. Paper presented at the *2004 Annual Scientific Sessions of NRCP.*

Transforming the Global-ASEAN Culture, Capability and Capacity of Higher Education and Research Strategic Alliances

SEAAIR
SOUTH EAST ASIAN ASSOCIATION FOR INSTITUTIONAL RESEARCH

De La Salle University
DASMARIÑAS

ACCOUNTING STUDENTS' INFORMATION RESPONSE TO INTERPRETING ACCOUNTING AS NUMBERS AND CARTOONS

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ABSTRACT

Accounting is not just about systematic recording, reporting, and analysis of financial transactions of a business. It is also a language that can be expressed in symbols and can be viewed as imagery (Belkaoui, 2004). Accounting education is familiar with accounting numbers, but not many people make the students average of the symbols and imageries in the accounting information. Cartoons (schematic faces) are the symbols we tested. This research analyzes accounting students' response in interpreting accounting in three forms of information - financial statement, financial ratios, and cartoons. We tested the processing time of the three forms of accounting information and examined the Type I and Type II errors in leverage, profitability, and liquidity. We used analysis of variance and Kruskall-Wallis test to examine the hypotheses. The result of this research shows that cartoon as accounting information was processed more quickly and accurate than financial statement and financial ratios. The mean of errors Type I and Type II in cartoons are also less than financial statement and financial ratios. The results of this study aimed to contribute to the development of teaching techniques in accounting education, particularly in analyzing accounting information in learning process.

Keywords: Response of accounting information, financial statement, financial ratios, cartoons (schematic faces) symbol, quickness, accuracy

INTRODUCTION

It is important to understand what Accounting is. It is also important to have ability to understand and analyze financial statements for students majoring in accounting. Accounting is often limitedly defined. It is not just about systematic recording, reporting, and analysis of financial transactions of a business. It is also a language that can be expressed in symbols, and can be viewed as imagery (Belkaoui, 2004). Accounting education is familiar with accounting numbers, but not many people give awareness to students about the symbols and imageries containing in the accounting information. Ability to analyze financial reports can help the users of financial statements to obtain information that is relevant and reliable. Based on the information, business could make decisions that will save time and cost of information (Munawir, 2002: 50)

Libby (1981), as quoted by Suryaningrum (2005), states that there are three options for improving decision making which include: (a) change the content or presentation of existing information, (b) provide education to decision makers, and (c) replace decision makers with a model. Belkaoui (2006:130) states that accounting is not just a process of identifying, classifying, recording, reporting, and accounting but also as a language (symbols and rules of grammar). Based on this theory, researcher is trying to assess the presentation of accounting information by using symbols or images of cartoon faces and trying to compare

speed and accuracy of interpreting financial statement and financial ratios. Chernoff (1971) began the design of schematic face in some sizes and shapes depending on the value bound in the variable. The use of schematic faces by Chernoff was adapted by several researchers, among others, are Moriarity (1979), Smith and Taffler (1984), Stock and Watson (1984), Smith and Taffler (1996), and Smith (2002). Smith and Taffler (1984) have conducted research in the UK environment. The study illustrates how the performance of intertemporal comparisons can be used by using schematic faces. They can help to distinguish the companies that "failed" and that "not failed". They state that schematic faces may provide a clearer indication about the financial status as compared to financial ratios. Smith and Taffler (1996) showed that schematic faces are processed faster and more accurate than the methods of the traditional presentation of financial information and does not deviate from accuracy.

This research analyzed accounting students' response to interpreting the accounting information in three forms: financial statement, financial ratios, and cartoons. We tested their processing time of them and examined the Type-I and Type-II errors in leverage, profitability and liquidity. Smith (2002) used schematic faces in his research, but we used a different schematic drawing by using pictures of cartoon character, Mr.Krabs.

THEORETICAL FRAMEWORK AND HYPOTHESES

Moriarity (1979) has conducted a research to describe the company's financial status by using the form face. The variables studied the data financial statements. He also tested the use of multidimensional graphs to illustrate the company's financial status. This study aimed to test the accuracy of the respondents' speed and classify the company into a "failed" or "not failed". The results suggest that respondents can easily detect changes of the faces that are presented, even faster and more accurate than using accounting numbers or financial ratios. Stock and Watson (1984) have also conducted similar research. There were two objectives of the research. First, it assessed the impact of changes in the format of reports to display the accounting information on the subject' ability to detect changes in the company's financial status. Second, compares the accuracy of the human's classification in (a) the presentation of information in the form of multidimensional graphics, (b) multidimensional graphics and estimates of the decision model; and (c) model the decision itself. The result is that humans who are using multidimensional graphics perform better than those humans who are using conventional tabular presentation. Meanwhile, the humans who are using multidimensional graphics performance are not significantly different from the decision model. In fact, human performance is a little better, although not significant.

Smith and Taffler (1984) carried out research attempts to improve the communication of accounting information by changing the format of figures to become the format of schematic faces. The results of this study did not indicate whether accounting data can be analyzed more quickly or more effectively by using face format than by using conventional methods. Rafdinal (1999) uses graphs to illustrate the company's financial status and employed 4x4 treatment groups based on the four complexities of the task (accumulation, recognition, estimation, and projection) and four forms of presentation (tables, bar graphs, line graphs, and circle graphs). The results show a significant difference between groups that he has observed or at least there is one group that is different.If viewed under task complexity group, to the complexity of the task of accumulation (accumulation), the results show that all forms of presentation show accuracy and precision do not differ significantly. To estimate the complexity of the task, other forms of presentation, (*i.e.* projection task complexity) suggests that bar graph is more effective compared to other forms of presentation, although not significantly different from other forms of presentation.

Smith (2002) has conducted a study on the same topic to determine the accuracy and efficiency in the use of accounting information by drawing cartoons in management decisions. This study used three financial

ratios: leverage, profitability, and liquidity by conducting random variable to the cartoons by using six alternative faces. The results indicate that accounting information in the form of cartoons can be processed faster and more accurate than the format of financial statements and financial ratios. Febrianto's (2003) study aims to explore empirically the usefulness of schematic faces as a communication tool compared with conventional presentation format. It focused on the relative usefulness of schematic faces, financial ratios, and accounting reports as the format of information for decision making as referred to previous studies. The study was conducted using experimental technique with samples classified into three groups: students, academicians, and practitioners.

Suryaningrum (2005) found that by using schematic faces, the accounting information submitted can be more effective than the accounting information presented in the form of financial ratios and financial statements. The study is a replication of research conducted by the Suryaningrum (2005) with the same measurement method of variables: profitability, liquidity, and leverage. The difference is that this study used different samples and different locations. This research used 130 students and different schematic faces. It also used different companies that were not used in previous research. It utilized financial data on food and beverage manufacturing companies in Indonesia. He has conducted a randomization schematic faces that are used for the presentation of accounting information. Smith (2002) conducted experiments using six alternative schematic faces as shown in Figure 2. The hypotheses are:

1. There is a difference between the speed of processing accounting information in the form of financial statements, financial ratios, and drawing cartoons.
2. There is a difference between Type I error that is healthy, yet, in fact it is not and Type-II error that is not healthy, yet, in fact it is, on the leverage that made use of accounting information in the form of financial statements, financial ratios, and drawing cartoons.
3. There is a difference between Type I error that is healthy, yet, in fact it is not and Type-II error that is not healthy, yet, in fact it is, on the profitability of which was made using accounting information in the form of financial statements, financial ratios, and drawing cartoons.
4. There is a difference between Type I error that is healthy, yet, in fact it is not and Type-II error that is not healthy, yet, in fact it is, on the liquidity created using accounting information in the form of financial statements, financial ratios, and drawing cartoons.

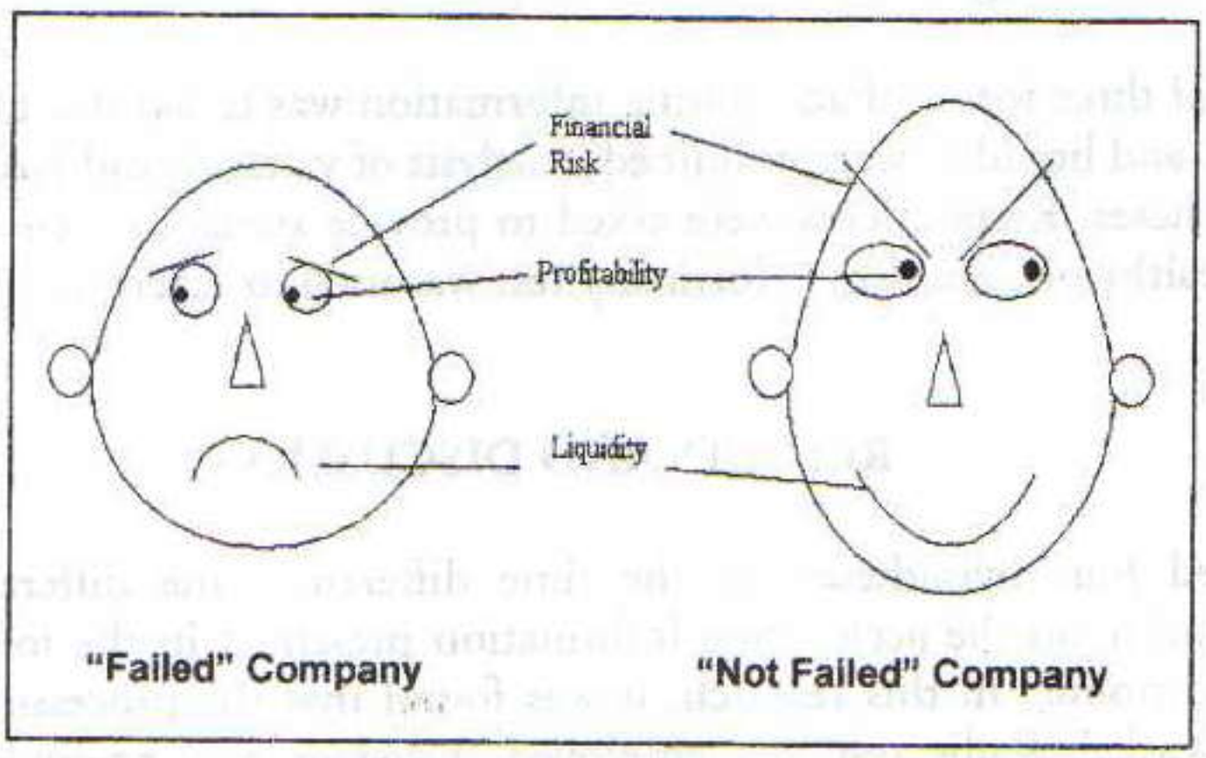


Figure 2. Alternative C Model Smith's Face
Source: Smith (2002)

RESEARCH METHOD

This research analyzed accounting students' response to interpreting accounting information in three forms: financial statement, financial ratios, and cartoons. The summary of balance sheet and financial ratios are from Indonesian Capital Market Directory (Bapepam, 2008). The three ratios used were profitability, liquidity, and leverage. Cartoon face model was adapted from Smith (2002) and modified in the form of a cartoon crab. Smith conducted a randomization between financial ratios and faces representing financial ratios and distributed assignment such as elucidated below as one of the two most optimal assignments.

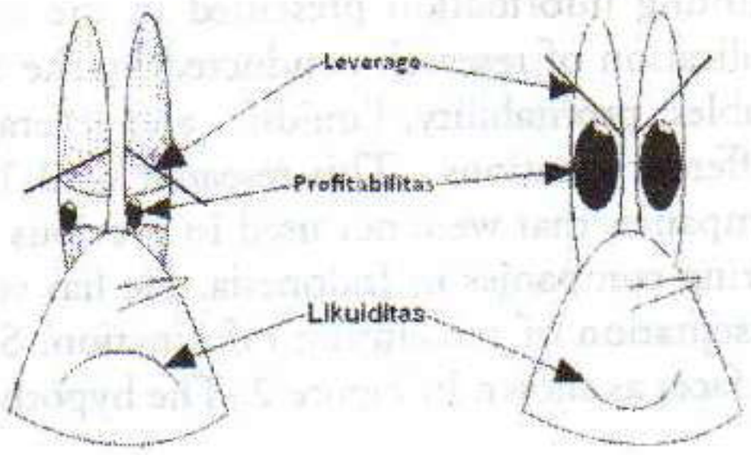


Figure 3. Cartoon Face Model

In this study, the ratios of healthy and unhealthy companies are represented in the form of a cartoon:

1. Liquidity is indicated by the shape of the mouth. Sound liquidity has led to a mouth shape up, and not sound liquidity has the form that paraded down the mouth.
2. Profitability is represented by the size of the eye. Sound profitability is represented by large eye balls while if profitability is not sound, the size of the eyeballs is narrow and small.
3. Financial risks (in this case is the company's financial leverage) is indicated by the angle of eyebrows. Sound leverage is identified by small corner of the eyebrows while if leverage is not healthy, the size of large angle of eyebrows is large.

The processing time of three forms of accounting information was tested the Type I and Type II errors in leverage, profitability, and liquidity were examined. Analysis of variance and Kruskall-Wallis test were used to examine the hypotheses. Respondents were asked to provide status in each section of questions to the two status options, healthy or unhealthy. Normality test was used to determine the statistical test.

RESULTS AND DISCUSSION

This study has tested four hypotheses on the time difference, the difference in error of leverage, profitability, and liquidity on the accounting information presented in the form of financial statements, financial ratios, and cartoons. In this research, it was found that the processing time distribution is not normal, therefore, Kruskal-Wallis test was employed. Leverage and profitability ratio were found in normal distribution. Using analysis of variance (ANOVA) to test the difference among financial statements, financial ratios, and cartoons, it was found that the data distribution of liquidity ratio was not normal. So, this research used Kruskal-Wallis Test.

Based on Table 1, it was found that difference tests between the formats of accounting information in the form of financial statements, financial ratios and a cartoon based on the processing time and errors

leverage, profitability, and liquidity were highly significant. Both the Type I and Type II errors have *p*-value of .00 (less than 0.05). It means that the formats of accounting information in the forms of financial statements, financial ratios, and a cartoon based on the processing time and errors leverage, profitability, and liquidity in both Type I and Type II errors are significantly different.

Table 1
Hypothesis Testing

Hypothesis	Difference test	*p*-value	Description
1	Time of process	.00	Highly significant
2	Error *Leverage* Type I	.00	Highly significant
	Error *Leverage* Type II	.00	Highly significant
3	Error Profitability Type I	.00	Highly significant
	Error Profitability Type II	.00	Highly significant
4	Error Liquidity Type I	.00	Highly significant
	Error Liquidity Type II	.00	Highly significant

The result of the first hypothesis on samples provides evidence that the processing time of accounting information between financial reports, financial ratios, and drawing cartoons was significant. This shows that there are differences in processing time between the financial statements, financial ratios, and a cartoon. The test results are consistent with the research findings of Moriarity (1979), Smith (2002), and Suryaningrum (2005). Thus, it can be proven that the accounting information in the form of cartoons can be processed more quickly than the format of financial statements and financial ratios. In contrast to the studies of Stock and Watson (1984), there is no processing time difference between cartoons and other forms of accounting information.

Leverage is identified by liabilities and total assets. The leverage of being healthy and unhealthy companies on financial accounting information is identified by the leverage ratio.The leverage ratio of healthy and unhealthy companies on accounting information was identified with cartoon images eye angle. Type I error that is healthy, yet, in fact it is not and Type II error that is not healthy, yet, in fact it is, were highly significant. It means that there is significant. There are differences in Type I and Type II errors leverage on accounting information in the form of financial statements, financial ratios, and drawing cartoons. The test results on the variables of leverage, in accordance with the previous researcher, Suryaningrum (2005). Both Type-I error and Type II are significantly different.

Profitability is identified by profit before tax, and total assets. Profitability ratio is identified by the size of a cartoon eyeball. The results of Type-I errors, that is healthy, yet, in fact it is not, and Type-II error, that is not healthy, yet, in fact it is, have the p-value of 0.00. It means that the result of the test is significant. It also means that there are differences in Type I and II errors profitability of the accounting information in the form of financial statements, financial ratios, and cartoon. These results were, not in accordance with the findings of Suryaningrum (2005), that there is no significant difference in Type I and Type II errors in the forms of cartoons, financial ratios, and financial statements.

Liquidity was identified by current assets and current liabilities, current ratio and the form of a cartoon mouth. The difference test of Type I and Type II errors was found to be significant. It means that there are differences in Type I and II errors liquidity on accounting information in the form of financial statements, financial ratios, and drawing cartoons. The test result shows that there are significant differences in the error differences between the financial statements, financial ratios, and drawing cartoons. The test results are consistent with the research findings of Morierity (1979), Smith (1984), Stock and Watson (1984), Smith (1996), Smith (2002), Febrianto (2003), Suryaningrum (2005). It can be concluded that the accounting information in the form of cartoons can be more understood by the

respondents as compared to other formats. It was proven that the cartoon image format errors made respondents less than the format of financial statements and financial ratios.

Finally, it was found that accounting is not just a process of identifying, classifying, recording, accounting, and reporting but accounting is also a language that can be expressed in symbols, and can be viewed as imagery (Belkaoui, 2004). It can give meaning to the different speeds. This has been proven by the variety of results. When the accounting information is symbolized in the form of imagery, it will be more easily understood than the accounting information that is symbolized in the form of numbers.

CONCLUSIONS, LIMITATIONS, AND IMPLICATIONS

In terms of average time processing, cartoons have less processing time. This proves that the cartoon image formats are processed faster than the current format of financial statements and financial ratios. Similarly, the testing errors on Type I and Type II on leverage, profitability and liquidity are increasing. This implies that the cartoon image formats have averaged fewer errors compared with the format of financial statements and financial ratios. This also proves that the cartoon format is processed more accurately than with the format of financial statements and financial ratios. The difference test in processing time among financial statement, financial ratios, and cartoon drawing is significant. The different test for Type I and Type II errors on leverage, profitability, and liquidity was also significant.

This research was limited to the knowledge of students accounting information presented in the form of financial statements (balance sheet summary), financial ratios, and cartoon images to determine the healthy and unhealthy companies. The researchers did not change the existing variable. Other limitation is that the research only consists of three ratios: leverage, profitability, and liquidity. Cases of being healthy and unhealthy companies presented in the questionnaire consists of only 10 financial reports from food and beverage manufacturing companies. In addition, the results of the study can not be generalized because the respondents were not the people who directly prepared financial statements. In the future, similar research can use more than three ratios or another case other than food and beverages. The same research should pay attention to expand the research samples on a subject that is directly produce and prepare financial statements.

REFERENCES

Adnan, M. A., & Kurniasih, E. H. A. (2000). Health level analysis to predict corporate bankruptcy potential with Altman approach (Case in Top Ten Companies in Indonesia). *Journal of Accounting and Auditing, 4*(2).

Almilia, L. S., & Kristiadi, E. (2003). Financial ratio analysis to predict financial distress manufactur a registered company in Jakarta Stock Exchange. *Journal of Accounting Auditing, 7*(2).

Bapepam. (2008). *Indonesian capital market directory. Institute of economic and financial research (19th ed.).*

Belkauoi, A. R. (2006). *Accounting theory* (5th ed.). Jakarta: Salemba Four.

Fess, W. R. (2006). Introduction of accounting, translated by Aria (21st ed.). Jakarta: Salemba Four Publishing.

Ghozali, I. (2005). *Application of multivariate analysis with SPSS software.* Diponegoro University Publishing. Semarang:

Hanafi, M., & Halim, A. (2003). *Analysis of the financial statement* (3rd ed.). Yogyakarta: Publisher and Printing Unit YKPN Stim.

IAI. (2007). *Professional standards of certified public accountant.* Jakarta: Salemba Four Publishing.

Indriantoro, N., & Supomo, B. (1999). *Business research methods* (1st ed.). BPFE. Yogyakarta.

Jumingan. (2006). *Financial statement analysis.* Jakarta: Earth Publishing.

Cashmere. (2008). *Financial statement analysis* (1st ed.). Jakarta: Raja Grafindo Persada. Ltd.

Kieso, D. E. (2002). *Intermediate accounting translated by Gina Gania and Ichsan Setiyobudi.* Jakarta: Grants. Publishing.

Mathis, R. L., & Jackson, J. H. (2002). *Human resource management.* Jakarta: Salemba Four Publishing.

Moriarity, S. (1979). Communicating financial information, through multidimensional graphics. *Journal of Accounting Research. 17*(1). 205-225.

Permono, I., & Darmawan. (2000). Aplikadi efficiency of banking industry in Indonesia. *Indonesian Journal of Economics and Business. 15*(1).

Romney, M. B., & Steinbart, P. J. (2003). *Accounting information system.* (9th ed.). Jakarta: Salemba Four Publishing.

Munawir. (2002). *Analysis of financial information* (1st ed.). Liberty. Yogyakarta.

Smith, M., & Taffler, R. (1984). Improving the communication function of published accounting statements. *Journal of Accounting and Business Research.* 139-146.

Smith, M. (2002). Cartoon graphics in the communication of accounting information for management decision making. *JAMAR, 1*(1).

Stock, Duane, Watson, & Collin, J. (1984). Human judgement accuracy. Multidimensional graphics versus models and humans. *Journal of Accounting Research.* 22(1).

Sule, E. Trianawati, K. S. (2005). *Introduction to management* (1st ed.). Jakarta: Prenada Media.

Suryaningrum, S. (2005). Efficiency and effectiveness analysis by using cartoon accounting information. Paper presented in the *8th Indonesian Accounting Symposium*, Solo.

Utama, S. (2000). Positive accounting theory and research: A review of literature. *Indonesian Journal of Economic: and Business. 15*, 1.

A STUDENTS' SATISFACTION REGARDING ONLINE INTERACTION FOR GRADUATE COURSES: A CASE STUDY OF SUKHOTAI THAMMATHIRAT OPEN UNIVERSITY

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ABSTRACT

This study investigated students' satisfaction with online interaction. Twelve master's degree students, majoring in teaching mathematics, were asked to submit extra assignments each week and participate in online discussions with their peers after attending two regular face-to-face seminar sessions. Students submitted 20 online assignments over 10 weeks. The tutor and their fellow students were able to comment on their work. After the final assignment, they were asked to complete an online questionnaire. Nine students submitted the questionnaire. Students indicated that they were satisfied with online interaction; they learned more from their peers' work and had encouragement from the tutor. The assignments helped them to think more critically and systematically. They broadened their ideas from reading other's work. They would be happy if one face-to-face tutorial was replaced by online interaction. Online interaction saved them travelling time and costs, reduced their feeling of isolation and allowed them more time to freely interact with their peers and gain more knowledge compared to the limited time usually spent in a normal class. While the sample was quite small, the results suggest that replacing a face-to-face tutorial with online interaction provides both educational and financial benefits to students and the university.

Keywords: Distance education, satisfaction and online interaction

INTRODUCTION

Today, e-learning is frequently used in traditional institutions as well as in distance education. It is convenient and flexible for students. Students can set their own time and place to study. They can save the cost of travelling. It provides collaboration. Technology makes collaboration among students much easier. Since many projects involve collaborative learning, the online environment is far easier to work in since learners do not have to be face-to-face. Everyone gets a chance to contribute (Lewis, Regina, 2005, WorldWideLearn, 2010, Mascle, 2010 and Kuther, 2010). Students have individual attention. Online students often have more one-on-one interaction with their professors than students in a classroom (Mascle, 2010). WorldWideLearn (2010) claimed that retention by study online is frequently better than in a traditional setting because of the variety of delivery methods used to reach different types of learners.

A few disadvantages of online education graduate study have been found. Kuther, (2010) mentioned that not all courses of study are easily available online. Students interested in more unusual fields may have difficulty finding online courses. Some students find electronic communication too impersonal; they miss face-to-face interaction with their lecturers and peers.

A distance education system should make use of the strengths of the available technology. An intelligent communication technology may be introduced to use as a medium for the interaction between lecturers and students and among students themselves. Since 1978, Sukhothai Thammathirat Open University (STOU) has employed a distance education system in which students are able to study by themselves without attending conventional classes. It uses printed textbooks and workbooks as the main media and other media for support (STOU, 2010). Online learning is provided for some courses. In 2010, STOU policy required all graduate programs to provide online learning to replace one of the two seminar sessions previously conducted each semester. Course teams, unable to meet the deadline, were given one year grace, and allowed to postpone their online component until 2011. Quite a few course teams requested permission to postpone the introduction because course materials or unprepared lecturers.

The Foundations and Methodologies in Mathematics course was one such case. Similar to the two regular face-to-face seminar sessions, conducted in the past, an extra online learning program was trialed to investigate students' satisfaction with online interaction. Three types of interactions: student-content interaction, student-teacher interaction, and student-student interaction were observed, involving both synchronous and asynchronous technologies.

METHODOLOGY

Population and sample. The population was graduate students at STOU. The sample size was 12 master's degree students, majoring in Teaching Mathematics, and enrolled in the Foundations and Methodologies in Mathematics course in the second semester of SY 2009-2010 under a program for curriculum and instruction at The School of Educational studies.

Instruments. There were 20 open-ended assignments covering various topics such as students' beliefs regarding the nature of Mathematics, their methods of teaching Mathematics, strategy of solving given problems and the value of problem solving, mathematical communication, connection of Mathematics to other subjects, inductive and deductive reasoning, students' understanding of the nature of functions, mathematical problems from everyday life, problems in teaching and learning Mathematics, and students' project proposals, followed by a questionnaire.

The assignments were from a developed Distance Training Package with 25 volunteer Mathematics teachers (Chantarasonthi, 2009). The three-part questionnaire was developed by studying from books and related research. Two experts were invited to suggest improvements. The mixture of 14 closed-and open-ended questions in Part 1 gathered general student information. Part 2 sought students' thoughts on the appropriateness of the assignments, their methods of approach, and their feelings about the interaction generated. A 5-point Likert scale was employed. Part 3 consisted of five open-ended items for students to express their opinions and suggestions.

Collecting data. Students were required to study course materials by themselves, submit assignments, and attend two compulsory weekend face-to-face seminar sessions at a study center to discuss and present their work as part of their assignments. Students were encouraged to do online assignments every week for 10 weeks after they attended the first seminar. Marks were awarded for assignments. Students were also asked to comment on friends' works.

The "Atutor" program was used as a tool for communication. Assignments were available for students to download. Announcements about submitting assignments and the final examination were updated regularly. Students were able to contact or chat with peers or with the lecturer via "Forums" or email and submit their work by uploading their files via "File Storage". The lecturers and their friends were able to

download and comment on their work. The lecturers read all of the students' works and gave encouragement and positive comments. All students submitted assignments, though not all were on time. Some were delayed due to working commitment to schools. Students admired their peers' work and talked with one another through forums. After they submitted assignments at File Storage, they told the lecturer at Forums. After the final assignment, they were asked to fill out a questionnaire posted online. There were nine students who answered the questionnaire. At the end of the semester, October 2010, all students attended the final examination.

Data analysis. Data were analyzed using percentage, mean and standard deviation. The level of opinion was interpreted from average scores as follows:

Table 1
Average Series and Level of Opinion

$\bar{X}$	Level of opinion
4.50 - 5.00	Very satisfied (Strongly agreed)
3.50 - 4.49	Satisfied (Agreed)
2.50 - 3.49	Moderate (Fair)
1.50 - 2.49	Less satisfied (Disagreed)
Less than 1.50	Not satisfied (Strongly disagreed)

RESULTS

The results were classified into two categories: students' general information and students' satisfaction regarding online interaction.

Students' general information. There were more females than males. Students' average age was 39.22 years. The oldest student was 49 and youngest was 29 years old. Six students had bachelor degrees in Mathematics education, one majored in Physical Education, one in Primary School Teaching, and the final student has a Bachelor of Science in Engineering. Seven were government employees working in public schools, one was in a private school, and one had his own business: a coaching school. Four taught senior high school, three taught junior high school, one taught primary school, and one taught all levels. The average work experience was 10.44 years with a maximum of 28 years and a minimum of three years. More than half had 5 to10 years teaching experience, two had less than 5 years and two more than 10 years teaching experience. Details are shown in Table 2.

Students were asked to discuss their reading of textbooks, which covered 15 units before taking the final examination (Table 3). None read all 15 units. Five read 6 to10 units and the rest less than six. Six indicated that they read in detail while only one just scanned through. Two read in detail only the units containing activities. Most read the announcements every time they logged into the web course. Only one student did it sometimes. With regard to commenting on friends' work, six said they did not have enough knowledge to comment while the rest had no comment.

Table 2
General Information About Students

Item	Frequency	Percent
Sex	9	100.0
Male	3	33.3
Female	6	66.7
Age min = 29 years, max = 49 years, $\overline{X}$ = 39.22 years, SD = 8.467		
Education Bachelor Degree	9	
B.Ed.	8	88.9
B.Sc.	1	11.1
Major	9	100.0
Mathematics Education	6	66.7
Engineer, Physical Education and Primary School Education	3	33.3
Employment	9	100.0
Public school	7	77.8
Private school	1	11.1
Own Business (coaching school)	1	11.1
Level of teaching	9	100.0
Primary school	1	11.1
Junior high school	3	33.3
Senior high school	4	44.4
All levels	1	11.1
Teaching Experience min = 3 years, max = 28 years, $\overline{X}$ = 10.44 years, SD = 9.126	9	100.0
< 5 years	2	22.2
5-10 years	5	55.6
>10 years	2	22.2

When asked why they enrolled, three students wanted to improve their teaching, two wanted to increase their career prospects, while three aimed to do both. Only one student indicated that he wanted to be a university lecturer. Details are in Table 4.

Students' satisfaction regarding online interaction. Students were asked about online interaction. On the average students were satisfied with the online interaction. Students were very satisfied that they did not feel alone. They were moderately satisfied about reading friends' work, feedback from the lecturer and the use of online to replace one face-to-face seminar. They found that they learnt from reading others' work, felt close to the lecturer and friends and broadened their ideas from reading and having the chance to comment on others' work. Details are in Table 5.

Table 3
Students' Behavior on Reading and Commenting

Item	Frequency	Percent
Number of units read in Textbooks	9	100.0
less than 6 units	4	44.4
6-10 units	5	55.6
How to read Textbooks	9	100.0
in detail	6	66.7
scanned though	1	11.1
in detail only with units containing activities	2	22.2
Read announcements	9	100.0

every time	8	88.9
sometimes	1	11.1
Comments on peers' work	9	100.0
No comment	3	33.3
not enough knowledge	6	66.7

Table 4
Purposes of Study of Students

Item	Frequency	Percent
The purpose of study	9	100.0
To improve their teaching.	3	33.3
To increase chance of promotion.	2	22.2
To improve their teaching and to increase chance of promotion.	3	33.3
To work in a university.	1	11.1

Table 5
Students' Satisfaction Regarding Online Interaction

Item	$\overline{X}$	SD	Level of opinion
Online Interaction	4.35	.657	Satisfied
Did not feel alone.	4.56	.527	Very satisfied
Satisfied with reading others' works.	4.44	.527	Satisfied
Satisfied with interaction via internet.	4.44	.726	Satisfied
Satisfied with feedback from the lecturer.	4.44	.726	Satisfied
Use online replace one session of face-to-face seminar	4.44	.726	Satisfied
Learnt from reading others' works.	4.33	.707	Satisfied
Felt close to lecturer and friends.	4.33	.707	Satisfied
Broadened ideas from reading other's work.	4.22	.833	Satisfied
Having chance to comment on others' work.	4.00	.500	Satisfied

Students were asked about the situation when they did assignments and their comments about assignments. The scores of the negative items were converted before calculating the total average score. It was found that on average, students agreed with the items. Students strongly agreed that they would use the ideas on how to enhance students' critical thinking to apply in the classroom. They searched for knowledge from other media to do assignments. The assignments helped them to think more critically and systematically. Students agreed that they sometimes received ideas to do assignments from friends' work. They enjoyed answering the questions on assignments. Also, they followed the instructions and submitted assignments for marks. They did not feel that doing assignments caused them a lot of burden or that if there was no mark they would not submit.

Students were asked about the assignments. On average, they agreed about the items. They strongly agreed that the assignments contained a variety of topics. They agreed that the assignments were challenging. They were happy with weekly assignment submissions. They felt that the assignments could have a few more items. They found that the number of online assignments was fair and the difficulty and contents of the assignments were appropriate.

The details are shown in Table 6.

Table 6
Students' Opinions About Doing Assignments

Item	$\overline{X}$	SD	Level of opinion
Doing Assignment: Students	4.09	.673	Agreed
Will use the idea (how to teach students critical thinking) to apply in the class.	4.78	.441	Strongly agreed
Search knowledge from other media to do assignments.	4.56	.726	Strongly agreed
Help to think more critically and systematically.	4.56	.527	Strongly agreed
Sometimes received the ideas to do assignments from friends' work.	4.44	.726	Agreed
Enjoyed answering the questions on assignments.	4.11	.928	Agreed
Followed the instructions.	4.33	.500	Agreed
Submitted assignments for marks.	3.78	1.093	Agreed
Did assignments cause a lot of burden.	2.22	.667	Disagreed
If no mark no submission.	2.00	.707	Disagreed
Assignments	3.56	0.621	Agreed
Variety of topics.	4.78	.441	Strongly agreed
Challenge.	4.11	.601	Agreed
Weekly submission.	3.89	.782	Agreed
A few more items.	3.44	.527	Fair
Amount of online assignments.	3.33	.500	Fair
The difficulty was appropriate.	3.22	.667	Fair
Very easy.	2.89	.782	Fair
Contents of assignments.	2.78	.667	Fair

Students were asked to give more details about the assignments, the contents, and their difficulties, the length of time to submit assignments, the type of feedback from the lecturer and friends, the difficulty of interacting online, and what they received from interacting online.

Assignments. Students said the contents were interesting. The assignments were appropriate. It challenged them to find the solutions and use the cases to try out with their students in the class. They were excited with the prospect of applying what they had learned in their own classrooms. Students said the assignments did not cover all details but were still useful. Students who did not teach Mathematics at a higher level had difficulty and had not enough knowledge to do assignments. One student said, it encouraged her to step up to teach high school Mathematics next semester. Assignments were different from other subjects and motivated them to learn and made them look at themselves and their teaching.

Due date for submission. All students found that the weekly submission of assignments was appropriate. Some commented that the due date should depend on the difficulty of assignments and the number of items. One student complained that she had limited time to do assignments because of work commitment.

Feedback. Students said the feedback from the lecturer was very good, especially when they were tired from work. The suggestions from the lecturer gave knowledge and opened new points of view which were very useful. They found that they benefitted from the online interaction. They had exchanged ideas with friends and the lecturer. Sometimes they did not know whether their answers were right or wrong but when they submitted them, they felt good by having encouragement to work harder. Some ideas were different and very useful for the work. Friends were very nice and willing to contribute their knowledge. They learned a lot from the interaction. Some students would like to have more feedback. Some students suggested that students should be divided into subgroups to be able to interact more often.

Problems. The problems that they had regarding online interaction were mainly the difficulty accessing the internet or their school or residence is far from the town where the internet could be used on the internet signal was not good. Therefore, they had limited time to use internet. They suggested that STOU should make the online learning system easier to use. Mathematical symbols cannot be used online unless uploaded in a word processor file or a scanned document. Sometimes they had a problem with using the technology. They solved the problem by seeking help from others.

Benefit from online interaction. Students asserted that the online interaction was useful because they were able to learn the same content at a different time. They had freedom to access the information. It was convenient and fast to access the information. When they had difficulty solving problems, they could search from the internet quickly. They were also able to discuss problems with the lecturer online. Sometimes it was inconvenient to ask about some topics with the lecturer in the classroom where time is limited. They were able to exchange ideas with friends. They received warm suggestions from friends and the lecturer. They learned about using technology.

DISCUSSION

The results of the study, even though the sample was small, is an indication that interaction online affected the students' learning behavior. Students were satisfied with the online interaction because they did not feel alone. They regularly received information from the lecturer via announcements. They were encouraged by positive comments on their work, particularly with the first assignment. Those who missed some points or did not complete the solutions were given helpful suggestions and recommendations. The lecturer responded promptly to all assignments and queries. Students who did not submit an assignment on time were contacted and encouraged to do so. They also had chances to reflect on their thinking by connecting their teaching experiences and Mathematics content to solve problems. The comments from the lecturer may encourage them to search more for information. They were also able to search for more information to do the assignments from the internet. They were able to compare their work with friends' work even though there was no right or wrong answer for some problems.

They found that it was convenient to interact online because it was flexible. They could interact with the lecturer and friends and any place at little cost. They had more time to think and they felt more relaxed asking questions than they would in the classroom. The results corresponded to the findings of Lewis, (2005), WorldWideLearn (2010), Mascle (2010), and Kuther (2010) about the benefits of online learning. Furthermore, the assignments made them think critically and the knowledge they gained could apply to their teaching.

Online interaction can be more effective than classroom study for adults who are studying while working. Therefore, online teaching can be a powerful component of education, especially for adult students. When students are satisfied, they tend to engage in the system which could result in an increased retention rate for students. This may also lead to more new students.

RECOMMENDATIONS

While the numbers were small, the results suggest that students were satisfied with the interaction online. If similar results are obtained in trials with larger numbers, the university should provide online learning for every course if the university has the capacity to do so. This would benefit students and give the university a more successful education system, with happy students, an improved standard of teaching, and a reputation as a leader in the use of technology in the system. Also, the university would save the cost of teachers traveling to teach face-to-face. Therefore, the university should support and encourage the

academic staff to concentrate on online learning. Regular and continuous training about online learning are required for those involved with the courses because the new version of the course could be updated frequently. It is important that the academic staff and the technologists and course designers exchange ideas regularly. This would make online learning more interesting to both students and the university.

To achieve these goals, it is vital to have adequate technical support for both staff and students. Well produced manuals for students are essential to reduce any initial confusion when they are introduced to the system. It is also essential to realize that technology does not teach. Without well prepared, dedicated, and supported teaching staff, the technology is useless.

REFERENCES

Chantarasonthi, U. (2009). Development of a distance training package for developing the teacher's competency on management of mathematics instruction. The School of Educational Studies Sukhothai Thammathirat Open University.

Coleman, S. (2010). *Why do students like online learning*? Retrieved June 15, 2010, from http://www.worldwidelearn.com/education-articles/benefits-of-online-learning.htm

Kuther, T. (2010). *What are the advantages and disadvantages of online education for graduate Study.* Retrieved June 15, 2010, from http://gradschool.about.com/od/distanceeducation/f/onlineadv.htm

Lewis, R. (2003). *Earning a degree online.* Retrieved June 15, 2010, from http://www.cbsnews.com/stories/2003/08/26/earlyshow/contributors/reginalewis/main570268.shtml

Mascle, D. (2010). *The benefits of online learning.* Retrieved June 15, 2010 from, http://www.buzzle.com/articles/the-benefits-of-online-learning.html

Sukhothai Thammathirat Open University (STOU). (2010). *Education under the distance learning system.* Retrieved June 14, 2010 from http://www.stou.ac.th/eng/DLS/

WorldWideLearn. (2010). *E-Learning essentials.* Retrieved June 15, 2010, from http://www.worldwidelearn.com/elearning-essentials/elearning-benefits.htm

FACTORS INFLUENCING FIRST YEAR STUDENTS' DROPOUT AT CHANDRAKASEM RAJABHAT UNIVERSITY

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ABSTRACT

This study aimed to determine the factors influencing the dropout of first year students at Chandrakasem Rajabhat University. Data were gathered from 185 first year students with grade point average lower than 1.60.

It was found that the factors influencing dropout of first year student were categorized in 5 aspects as (a) learning factors was the most important followed by, (b) instructor factors, (c) miscellaneous factors, (d) friends get together factors and, 5) activities participation factors. Moreover, it was found that gender was significantly different in answering the questionnaire; female students thought that the instructor has more important role on students' dropout. On the other hand, male students thought that friends get together was more important role on students' dropout. When categorized by the faculty of studying found that: the students of (a) Humanities and Social Sciences faculties mostly agreed that the 5 mentioned factors influenced on students' dropout followed by (b) Management Science Faculty, (c) Agriculture and Life Science Faculty, (d) Science Faculty, and (d) Education Faculty. Recommended measures to reduce the number of students' dropout were strictly checking of class attendance by the instructors, not missing the class if not necessary, selection of activities participation, studying intention, regular reviewing of study lessons, and submit the assignments on time.

Keywords: Student dropout, low GPA

INTRODUCTION

The success of national development is dependent on the progressive of socio-economics status, which can be done by education base planning to provide a qualified people. The government should be arranged an appropriate budgets, resources, and supportive factors to support the education, especially in the higher level in order to provide vocational personnel for social and country development thereafter.

Students' dropout is the major problem of the university which is produced a qualified personnel for national development. Chandrakasem Rajabhat University has offered both normal and twilight education programs. The students enroll in this university with large amount every year, in the year 2009.There was 33.92 percent of students' dropout which affect on the target number of student graduation and quality of education arrangement as budgeting and resource person recruitments.

The causes of students' dropout in the faculty of Industrial Education, North Prachomkrao Technology University studied by Kaset Muangthong (2001) found that the main reasons were context study was not related with former knowledge and too difficult; learning aspects were lacking of study plan, improper time arrangement, and students could not adapt to new environment. The opinions of the advisor found that, the students who lack of basic knowledge, too difficult context lessons, and study in dislike field. Hypothesis testing found the opinion of student's dropout causes in each curriculum and field of study were not statistically difference at 0.05 level of significant.

The student's dropout at Chiangmai Rajabhat University in the year 2007 (Rumpueng Poolsuk, 2008) found 47.6 percent in male and 52.4 percent in female. The main reasons of students' dropout were entrance in dislike field of study 37.5 percent, grade lower than minimum level 22.2 percent, lack of basic knowledge 19.3 percent, 52.2 percent of students' dropout received tuition fees from the parents, 33 percent have no time to attend class because they have to work for supporting themselves. 96.8 percent of students' dropout pointed out that the instructor performance was not the cause of dropout and 91.4 percent could be adapted themselves to study in the university.

Wutipong Thongkorn and others (2008) studied at Huachaew University and found that students' dropout was 25.23 percent from 1,498 n with 66.96 percent of female and 33.04 percent of male, freshy students 72.56 percent; field of study was 94.92 percent of accounting, Environmental Health 86.21 percent and at least in Pharmacy (13.95%). No correlation was found among economical, studying, self adaptation, personnel problem factors and educational management system with grade point of students' dropout.

This project aims to determine the factors influencing dropout of students at Chandrakasem Rajabhat University such as learning, instructor, friend getting together, activities participation, and others.

PROCEDURES

This project was a survey research. Data were gathered by using questionnaire and in-depth interview of 171 first year students. And, in-depth interview with student who has grade point average lower than 1.60 of 14 first year student. For this group interview is among 4 to 5 persons per group discussion. Statistical analysis of data were percentage, mean, standard deviation and analysis of variance, significant at $p \leq .05$.

RESULT

1. ***General information of the respondents.*** Respondents were male more than female; age 16-20 years, study in the faculty of Management Science more than other faculties; staying in the dormitory during studying; born in Bangkok and suburb; parents stay together, parents' occupations are government officer, public enterprise, and merchant; monthly expenses received for students are 5,000-9999 Baht. Financial support is mostly coming from their parents, GPA from high school were 2.01-3.00, GPA in the first semester were 1.01-1.50.

2. ***Factors influencing on students' dropout.*** Student opinions on the factors influencing of students' dropout (Table 1) found that: Learning factors found the student lack of learning techniques was the first priority factor followed by too crowded of central classroom and too difficult of studied subjects.

Instructor factors were categorized as teaching techniques not interesting, operation skills of audio visual aids, modernization of audio visual aids preparation, and friendly behave to student influenced on students' dropout in almost the same level.
Friend get together, especially in the aspects of lack of friend to be tutor for not understand subjects got the highest influence score followed by copy homework assignment from friends and lack of close friend aids in studying.

Activities participation in the aspect of activities arrange by university quite often are at the same time of class attendance and participated activities not support on learning outcome, were rated at the same level followed by working for self support and no time to attend class.

Miscellaneous factors such as students keep on talking during studying, technical services provided by the university out of date, and students absent from class quite often were the major causes of students' dropout.

3. For individual factor, male students are caused more students' dropout than female students, faculties which students studied were significantly interact with learning, instructor, friends get together, activities participation and miscellaneous factors; parents' occupation also significantly interact with friend get together; students' grade received from high school significantly interrelate with learning, instructor, friends get together, activities participation and miscellaneous factors (Table 2).

4. Directions and measures to reduce number of students' dropout were presented in Table 3. Five directions were ranking by percentage as more attention on studying, regular reviewing of studied lessons, do homework regularly and submit on time, more interesting in studying, tutor the studied lessons with friend more often.

Five measures were also ranking as class absence control, class attendance control, activities participation screening, regularly submit assignments, summer enroll starting in the first year, including instructor aids learning.

Table 1
Mean and Standard Deviation of Factors Influencing on Students' Dropout

No.	Item	n	$\bar{X}$	SD
	Learnir.g factor			
1	Classroom environment not suited for studying	171	3.08	0.868
2	Too crowded of central classroom	171	3.40	0.884
3	Lack of readiness preparation of audio visual aids	171	3.07	0.933
4	Too difficult of studied subjects	171	3.29	0.852
5	Student lack of learning techniques	171	3.44	0.827
	Instructor factor			
1	Operational skills of audio visual aids	171	3.35	0.878
2	Teaching techniques not interesting	171	3.38	0.862
3	Modernization of audio visual aids preparation	171	3.36	0.823
4	Friendly behave to students	171	3.27	0.964
5	Iregularization on teaching schedule of instructor	171	2.86	1.008
6	Advisor do not advice how to register	171	2.99	1.012
7	Not enough advisor	171	2.92	0.961

8	Advisor lack of techniques to advice students	171	2.86	0.929
	Friend get together			
1	Friend ask for playing computer games much more than studying	171	2.64	1.107
2	Lack of friend to be tutor for not understand subject	171	3.13	0.992
3	Let friend attend class instead and ask from friend thereafter	171	2.57	1.000
4	Copy homework assignment from friend	171	3.03	1.020
5	Let friend do and submit homework instead	171	2.50	1.031
6	Friend ask for alcoholic drink and night tour	171	2.50	1.119
7	Lack of close friend aids in studying	171	2.77	1.150
	Activities participation factor			
1	Work for self support then no time to attend class	171	2.60	1.146
2	Senior assign too much activities	171	2.50	0.884
3	Activities done not support on learning outcome	171	2.71	0.937
4	Activities arrange by university quite often are at the same time of class attendance	171	2.73	0.944
	Miscellaneous factors			
1	No chance to select interesting major	171	2.66	0.989
2	Studied subjects not interesting	171	2.88	1.069
3	Need to re-entrance in the other major/university	171	2.51	1.119
4	Insufficient services provided by the university	171	2.90	1.038
5	Technical services provided by university out of date	171	3.04	1.042
6	Students absent from class quite often	171	2.95	1.089
7	Students keep on talking during studying	171	3.26	0.980

Table 2
Individual Factor (Sex) and Interactions Influencing on Students' Dropout

Sex	*N*	$\bar{X}$	S.D.	*t*	Sig
Male	105	3.048	0.570	-2.360	0.019*
Female	66	3.285	0.739		

	F	Sig
Faculty VS Learning	2.944	0.022*
Faculty VS Instructor	2.604	0.038*
Faculty VS Friends get together	7.222	0.000*
Faculty VS Activities participation	4.911	0.001*
Faculty VS Miscellaneous factors	6.892	0.000*
Parents' occupation VS Friends get together	3.464	0.010*
High school grade received VS Learning	6.494	0.000*
High school grade received VS Instructor	9.859	0.000*
High school grade received VS Friends get together	5.581	0.001*
High school grade received VS Activities participation	3.802	0.011*
High school grade received VS Miscellaneous factors	3.691	0.013*

*significant at 5%

Table 3
Directions and Measures to Reduce Number of students' dropout

Item	%
5 Directions rank by percentage	
More attention on studying	39.80
Regular reviewing of studied lessons	10.20
Do homework regularly and submit on time	9.18
More interesting in studying	6.12
Tutor the studied lessons with friend more often	5.10
5 Measures rank by percentage	
Class absence control	5.94
Class attendance control	5.90
Activities participation screening	4.95
Regularly submit assignments	2.97
Summer enroll starting in the first year	2.97
- Instructor aids learning	2.97

5. In-depth interview in three aspects as university environment, causes of getting low score, and corrective actions. The result found that: the students feel proud to study in Chandrakasem Rajabhat University which has a huge area and good environment, lot of friends, the instructors are friendly and pay attention to students, good advice, and tuition fees does not high. Causes of getting low score due to wake up late then can not attend morning class on time, some students have to work for self support, instructors assign too much homework, and some students accumulate homework then can not finish on time. Some students do not interesting in studying, get together with no good friend, seldom meet advisor, some subject context is too difficult to understand, some students are the athlete who need to practice quite often then can not wake up early in the morning, some students absent from class quite often in order to participate in many activities, some students have pressure to study the difficult subject, result in no inspiration, not intend and interest to study, need some case studies or activities in between of lecturing. The corrective actions can be done by attending class on time in every subject, get together with good friends, follow up technical information from internet, advisor aids learning is required, optimize time arrangement, self responsibilities, moral support from the family are also require for studying.

DISCUSSION AND CONCLUSION

Factors influencing on students' dropout in several aspects were studied; the first is learning aspect which can be ranking as student lack of learning technique was the first priority factor followed by too crowded of central classroom and too difficult of studied subjects which were the same direction of Renu Poolsawat (1982) studied in 9 universities and found the causes of students' dropout was lacking of learning techniques, also the study of Kaset Muangthong (2001) found the main reasons were context study was not related with former knowledge and too difficult; learning aspects were lacking of study plan, improper time arrangement, and could not adapt to new environment.

Instructor factors were categorized as teaching techniques not interesting, operation skills of audio visual aids, modernization of audio visual aids preparation, and friendly behave to the student influenced on students' dropout in almost the same level which were in correspond with the study of Umpai

Intaraprasert and others (2009) found the causes of students' dropout at Rajabhat Suandusit University were the instructors lack of teaching techniques, assign too much work, and seriousness of the instructor.

Friends get together factor, especially in the aspects of lack of friend to be a tutor for not understand subjects got the highest influence score followed by copying homework assignment from friends and lack of close friend aids in studying, which quite similar to the study of Umpai Intaraprasert and others (2009) who found that dropout of students caused by too much class absence to allow to take an examination and lack of friend to be advisor.

Activities participation in the aspect of activities arrange by university quite often are at the same time of class attendance and participated activities were not support on learning outcome were rated at the same level followed by working for self support and no time to attend class, which were the same direction of Rumpueng Poolsuk (2008) studied who found the main cause (33% of total causes) of students' dropout was no time to study because they have to work for self support.

Miscellaneous factors such as students keep on talking when the lecturer lecture, technical services provided by the university out of date, and students absent from class quite often, were the major causes of students' dropout which correspond with Wutipong Thongkorn and others (2008) and Umpai Intaraprasert and others (2009) studied miscellaneous causes of students' dropout and found that the students need to improve the services and computer system provided by the university.

SUGGESTIONS

1. Policy suggestion to the university:
   - Improve teaching techniques to be more interesting, more modernize, easy to understand, polite talk, and credit transfer system to be more up date and quicker.
   - Improve the roles of instructor and advisor to assist the student in adapting themselves to the new environment and learning techniques.
   - Arrange senior assistant to be a tutor of new students who can cot caught up the class lecture.
   - Improve activities provided by the university to be more useful and relax.
   - Improve services and computer systems provided by the university.

2. Suggestions for the students:
   - Students with GPA lower than 1.80 should enroll less credit than the others. Provide additional lecture or tutor to the students.
   - The students should pay more attention in studying, review studied subjects regularly, do homework and submit on time, self responsibilities, not absent from class, consult advisor as needed, and intend to be a good person.

REFERENCES

Kaset, M. (2001). The causes of students' dropout in faculty of industrial education, North Prajomkrao Technology University. Bangkok, Prajomkrao Technology University. *Research Paper.*

Poolsuk, R. (2008). The students' dropout in Chiangmai Rajabhat University in 2007. Chiangmai, Chiangmai Rajabhat University. *Research Paper.*

Poolsawat, R. (1982). The causes of students' dropout in 9 private universities in Thailand. Bangkok, Thai Commerce Chamber University. *Research Paper.*

Thongkorn, W. et al. (2008). The factors affecting to students' dropout at Huachaew University. Bangkok, Huachaew University. *Research Paper.*

Umpai Intaraprasert and others. (2009). The factors affecting to students' dropout at Suandusit Rajabhat University. Bangkok, Suandusit Rajabhat University. *Research Paper.*

BIG SISTER-SMALL SISTER RELATIONSHIP MODEL OF UNIVERSITY-BASED AND COMMUNITY COLLEGE-BASED TEACHER EDUCATION

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ABSTRACT

The pilot study reported here is a work in progress. It presents the teacher education problem in the Bicol Region, Philippines and the response of two universities in Albay have made to address it. The study is a sequel to the first one entitled "A Synergy Approach to Facing the Challenges of Quality and Relevance of Higher Education in Albay Province" conducted by the same researchers. The pilot study of "big sister – small sister" relationship model involving two universities and two community colleges was initiated to showcase the possibility of raising the licensure examination result in the short term and the quality of teacher education in Albay Province in the long term, through a mutually reinforcing partnership between two universities as big sisters and their shared benevolent intent to help community colleges as small sisters. The premise underpinning the pilot study is that a strong university-based teacher education can provide a much needed assistance to a developing community college. Programs, projects, and activities, actual and planned, shared by two universities to strengthen themselves and their initiatives to help community colleges as small sisters are reported in this practical action research. The good collaborative practices reported in this study may be replicated by other teacher training institutions in Bicol Region.

Keywords: Teacher education, big sister-small sister relationship model, community college, university

The Problem

Macro and micromodels of how best to strengthen alliances for academic sustainability and competiveness exist. Persistent themes permeating all models are the need for collaboration between and among institutions and the use of synergy approach in facing pressing higher education challenges. In an earlier paper, the concept of synergy approach to address the challenges in higher education in Albay Province in the Philippines was presented (Cabredo & Jenkin, 2009). The idea posited was that what all Higher Education Institutions (HEIs) can accomplish working together would be worth more than what they could accomplish working as stand alone entities. Further, the paper expounded that the higher education goal of producing quality and world-class graduates could be realized more effectively and efficiently through collaborative actions of HEIs: first, by integrating plans for some educational programs for greater synergy effect and second, by achieving economies of scale through sharing facilities, research and development activities, extension services and production endeavors. Adapting the strategic platform of the Philippine Main Education Highway, an action plan was drawn recommending, among others, that HEIs bond together to give each higher education student opportunity to enjoy his/her constitutional

right to quality education that will make him or her a whole person, productive and socially responsible Filipino citizen.

The same paper presented data on one persistent problem among HEIs in Bicol Region – that of job-skills mismatch as a result of oversubscription of some courses and under subscription of others. Some of the undersubscribed courses are the ones needed to boost the local economy. On the other hand, some of the oversubscribed courses produce too many graduates to be absorbed by the local economy and neither are the latter the ones required by the international market. Consequently, many graduates end up either unemployed or underemployed. This observation underscores the need for redirecting the course offerings of HEIs in the Region to the priority needs of the local economy and the global knowledge-based economy. This job-skills mismatch is one of the urgent concerns identified by the Presidential Task Force on Education (PTFE), a body created by the national leadership to devise measures to improve the educational system in the country (PTFE, 2008).

One of the oversubscribed programs is Teacher Education. Teacher Training Institutions (TTIs) are among the HEIs with ballooning enrolment and which turn out the biggest number of graduates (NEDA, 2010). All state universities and colleges (SUCs) in Bicol Region, all Local Government Unit- (LGU-) run community colleges and majority of private HEIs in Bicol offer Teacher Education. However, Teacher Education has consistently performed low in the Licensure Examination for Teachers (LET). The huge graduate turn out and the poor LET performance of Education graduates exacerbate the problem of job-skills mismatch pushing education graduates to accept jobs and remuneration not commensurate to their academic preparation.

On top of job mismatch is an even graver problem – low quality of preservice Teacher Education. Poorly trained teachers is one of the identified causes of poor performance of pupils in the basic education and in higher education (NEDA, 2008). Low quality of education is a persistent problem in the Bicol Region. It is characterized by the growing number of pupils/students with learning difficulties, poor readers, which may directly or indirectly cause the Region's low participation rate, high drop out rate, low cohort survival rate, poor attendance, and low achievement level at the basic education level. Likewise, at the post secondary level, manifestations of low quality education include low passing percentage in trade assessment and certification, low passing rate in college entrance examination and for those who completed college work, low passing rating in licensure examinations (NEDA, 2007).

The quality of basic education, the bedrock upon which all human resource development is founded, rests on the teachers that TTIs produce, hence, the urgent need to strengthen the alliance of all the TTIs in Bicol Region for them to work as one to raise the quality of their teacher-graduates.

There are a number of ways of forging interrelationships between and among HEIs to address the challenges posed by the current state of tertiary education in Albay Province. Synergy gains may be attained through integrating plans for admissions and enrollment, offering of academic programs, students' experiential learning program, and staff development programs. Likewise, synergy effects may also be realized through HEIs' sharing of instructional facilities, conduct of research and development (R&D), extension or community work, and production endeavors.

This present paper actualizes two of the objectives in the previous paper, which are: (a) To evolve an educational infrastructure in Albay that would facilitate: the integration of plans for various educational services and the sharing of instructional facilities, research and development, extension/community work and production endeavors; and (b) To establish horizontal, vertical or affiliate interrelationships between and among the Albay HEIs to push for quality and relevance in tertiary education (Cabredo & Jenkin, 2009).

Objectives: This pilot study, which is yet a work in progress, reports the synergy approach adapted by Bicol University and Aquinas University, both in Legaspi City. It intends to realize these objectives:

1. To determine the relative performance of TTIs in Albay Province in the 2009 LET benchmarked against high performing national and regional TEIs
2. To describe the pilot try-out experiences of two universities in Legaspi City as they actualize the big sister – small sister relationship model in their attempt to capacitate community colleges; and
3. To design a participatory big sister – small sister model of improving synergy among TEIs in the region.

DATA AND METHODOLOGY

The study is a practical action research conducted "... for the purpose of solving a problem or obtaining information in order to inform local practice"(Fraenkle & Wallen, 2006). The eventual replication of the big sister – small sister model by other state universities and colleges (SUCs) in Bicol Region, each adopting a private Teacher Training Institution (TTI) or community college. can create a base of ideas that could generalize to policy or practice. The administrative functions the researchers perform put them in a position to undertake the necessary procedures and implement the recommendations, an assumption underlying action research.

The initial stage of this research undertaking is the data analysis of the most recent (April 2010) result of the Licensure Examination to determine the extent of problem of teacher education graduates as indicated by their performance in the exam. Informed by the data, the researchers propose a plan of action for improving the LET performance of TTIs and the quality of preservice teacher education. This pilot study involves the two well established universities in Legaspi City and two community colleges in Albay. The practical action research design was so adopted because the research process permitted the researchers to "learn while helping" (Chambers, 2003).

RESULTS AND DISCUSSION

The Teacher-Education Challenge in Bicol Region

One direct indication of the problem of teacher education in Bicol Region is the TTI- graduates' performance in Licensure Examination as shown in Tables 1 and 2. Fewer than one in five (17%) passed the 2010 Licensure Examination for Teachers (LET), with Bachelor of Elementary Education BEEd) performing lower (14%) than the Bachelor of Secondary Education (BSEd) graduates (19%). As expected, SUCs education graduates performed better (24%) than their counterparts in either the Private TTIs (12%) or Community Colleges (13%).

Table 1
LET Performance of SUCs, Private HEIs, and Community Colleges in Bicol

H E Is	BEEd Exam	Passers	%	BSEd Exam	Passers	%	Total Exam	Total Passers	%
SUCs (n=8)	711	177	25	1,135	261	23	1,846	438	24
Private TEIs (n=63)	1,484	140	9	742	119	16	2,226	259	12
Community Colleges/ Local Colleges (n=11)	384	55	14	181	18	10	580	73	13
GRAND TOTAL /Ave	2,579	372	14	2,058	398	19	4652	770	17

Table 2
LET Performance of BU Benchmarked Against National TEIs

T E Is	BEEd Exam	Passers	%	BSEd Exam	Passers	%	Total Exam	Total Passers	%
Bicol Region TTIs	2,579	372	14	2,058	398	19	4652	770	17
University of the Philippines -Diliman	30	30	100	88	88	100	118	118	100
UP – Los Banos	-	-	-	28	26	93	28	26	93
De La Salle –Manila	12	12	100	35	35	100	47	47	100
Univ. of Sto Tomas	12	11	92	57	51	89	69	63	91
Ateneo de Manila				9	0	100	9	0	100
Phil. Normal Univ.	27	15	56	141	100	71	168	115	68

Benchmarked against the national capital region's top ranking TTIs (ranging from 68% to 100%) the Bicol Region's TTIs' performance of 17% on average leaves so much room for improvement. Low performance in LET implies that the education graduates' skills acquired in TTIs do not meet the level and proficiency required by the teaching profession.Teacher Education program remains to be a very popular program choice of tertiary education students. But there is a need to strike a balance between quality and equity in students' access to teacher education programs in the Region. Policy/Program actions on the following maybe formulated jointly by the Region's TTIs: a) Selection and admission of students in the teacher education program; b) Curriculum development focusing on raising the content and proficiency standards of teacher education in the Region; c) Selection and admission of students in the teacher education program; d) Continuing Professional Development of TTIs' faculty through advanced degrees (Certificate, Diploma, MA/MS, Ph.D./Ed.D. and or attendance to in-service trainings (INSET) to be initiated by the Centers of Excellence (COEs) and Centers of Development (CODs) in Teacher Education.

Although it is recognized that the current SUC budgetary allocations are based on enrollment levels, hence, their tendency to maximize their enrolment, it is iterated that SUCs should take an "advancing role" in offering courses and not compete with the private HEIs; they should collaborate, not compete" (The Presidential Task Force for Education, 2008). There is a need for SUCs to limit their enrolment in Teacher Education Program as this is already being taken care of by community colleges and TEIs. What is needed is for SUCs and the other well established TTIs to help strengthen the weaker ones. They could concentrate on expanding graduate studies and initiate other continuing professional education programs to improve the teaching efficiency and effectiveness of the faculty of private TEIs and of the community/local colleges. In Albay Province, the Bicol University College of Education (BUCE) is the Center of Excellence (COE) while Aquinas University of Legaspi (AUL's) College of Education is a Center of Development (COD). Both can play active role in "education of the educators," in preparing research-based instructional materials in teacher education and sharing the same to the private TTIs and community colleges. These two Universities, acknowledging their resource potentials, have embarked on adopting two community colleges on a pilot basis to showcase how the big-sister – small-sister model can help raise the LET performance of teacher education graduates and the quality of teacher education in Albay Province.

The Practice and Promise of Big Sister–Small Sister Relationship Model

BUCE, known as the Albay Normal School in the fifties and Bicol Teachers College in the sixties, has retained its status as key teacher training institution in Bicol Region over the years. It is one of the two Centers of Excellence (COEs) in Bicol Region. Attached to its COE status is the role of leading the preservice, inservice and continuing professional education of teachers in Region V. Through the

initiative of the CHED Commissioner, the Center for Teaching Excellence was created in 2009 to promote excellence in teacher education in Bicol Region.

On the other hand, there are some long standing TTIs in the Region recognized for their teacher training excellence. Aquinas University of Legaspi (AUL) for one had been recognized as COE in 1996 to 2000 but due to change of administration and the impact of "Typhoon Reming" which directly hit AUL destroying most of its documents, the recent performance and impact assessment of AUL as COE resulted in downgrading its status from COE to COD. The strength of Aquinas University of Legaspi as a teacher training institution, however, endures and can complement that of BUCE Center for Teacher Excellence to raise the quality of educational provision in the Region.

In the recently concluded 1st Teacher Education Stakeholders Conference, educators from all over Bicol Region representing SUCs, community colleges, private TEIs, the Department of Education (DepEd), CHED, and other partner agencies came together to address the issues and challenges facing teacher education in the region. In her keynote speech, CHED Commissioner Nenalyn Defensor enjoined all educators to raise the quality of teacher education which is direly needed in "saving our future", an approach towards this end is networking. Bicol University along with its partner, AUL, will serve as central hub while the seven SUCs will serve as subregional hubs. The central and the subregional hubs will each take five private TEIs and/or community colleges as satellites, thus radiating outwards the "culture of excellence" modeled after the famous "normal schools' in the fifties.

To jumpstart this networking project, there is a need to pilot test the knowledge management and sharing with BU and AUL (as big sisters) taking on community colleges (as small sisters) to assist them in their efforts to raise the quality of teacher education. The objectives of the pilot study which is still in progress are enumerated below.

Objectives: For the big sisters (BU and AUL): (a) To role model excellence in teacher education and radiate the same outwards to their adopted "small-sisters" (community colleges); (b) To undertake activities/projects necessary in developing Teacher Education Programs through strategic development agenda and projects in curriculum development and faculty development; (c) To upgrade teaching facilities, library holdings and other learning resources; (d) To sustain and enhance research capabilities of community college faculty through strengthened graduate programs in Teacher Education; and (e) To undertake extension and linkages through consortia and collaborations with partner agencies in education.

BUCE Center for Teaching Excellence along with Aquinas University in Legaspi City as Big Sisters to Libon Community College and Community College of Manito (Small Sisters)

The big sisters (BU and AUL) radiate their knowledge resource outwards, sharing it with the community colleges (Libon Community College and Community College of Manito). Both universities (BU and AUL) have adequate library and information systems and good electronic communication facilities in place, hence, the knowledge management and sharing is efficiently implemented with the two community colleges as beneficiaries. This proves costeffective and useful strategy as it allows for easier consolidation of information and cross-fertilization of ideas (ADB, 2008). Knowledge is provided to the community colleges on a "requested basis" arrangement.

Partnership Roles Between the Big- Sisters (BU & AUL)

Before embarking on their role as big sisters the BU and AUL personnel have to mutually reinforce themselves through learning from each other. Capacity development through sharing experts' services, particularly management and faculty development had been undertaken. An series of curriculum development trainings were conducted in both universities with trainers coming from national and local

HEIs. With renewed competence, the faculty from both universities could confidently respond to requests from the two community colleges.

The two universities as big sisters subscribe to the principle that partnerships work best when the priorities of partners are complementary and their powers are balanced. This is the guiding principle that permeates the partnership of BU and AUL. With this overriding principle are attitudes and practices the faculty from the two universities have adopted: (a) awareness of educational changes; (b) acknowledgement of the need for continuous improvement; (c) continuously evolving network structures to fit the changing educational context; and (d) developing an ethos of being an open, future-oriented, outward-looking educational institutions rather than a closed, unchanging, inward-looking ones.

Partnership Roles Between the Big Sister and Small Sister (University and Community College)

Bicol University has been helping Libon Community College in Libon, Albay in a number of ways, like: (a) providing short term faculty development in terms of conduct of seminars and trainings and demonstration lessons for teachers and students; conduct of LET review classes; (b) extension services; and (c) development of curricular programs. On the other hand, Community College of Manito, being a very community college has been a recipient of assistance from AUL in the form policies and standards formulation, management and faculty capacities development, curriculum development. The framework of the Big-sister and Small Sister Relationship Model is illustrated in Fig. 1

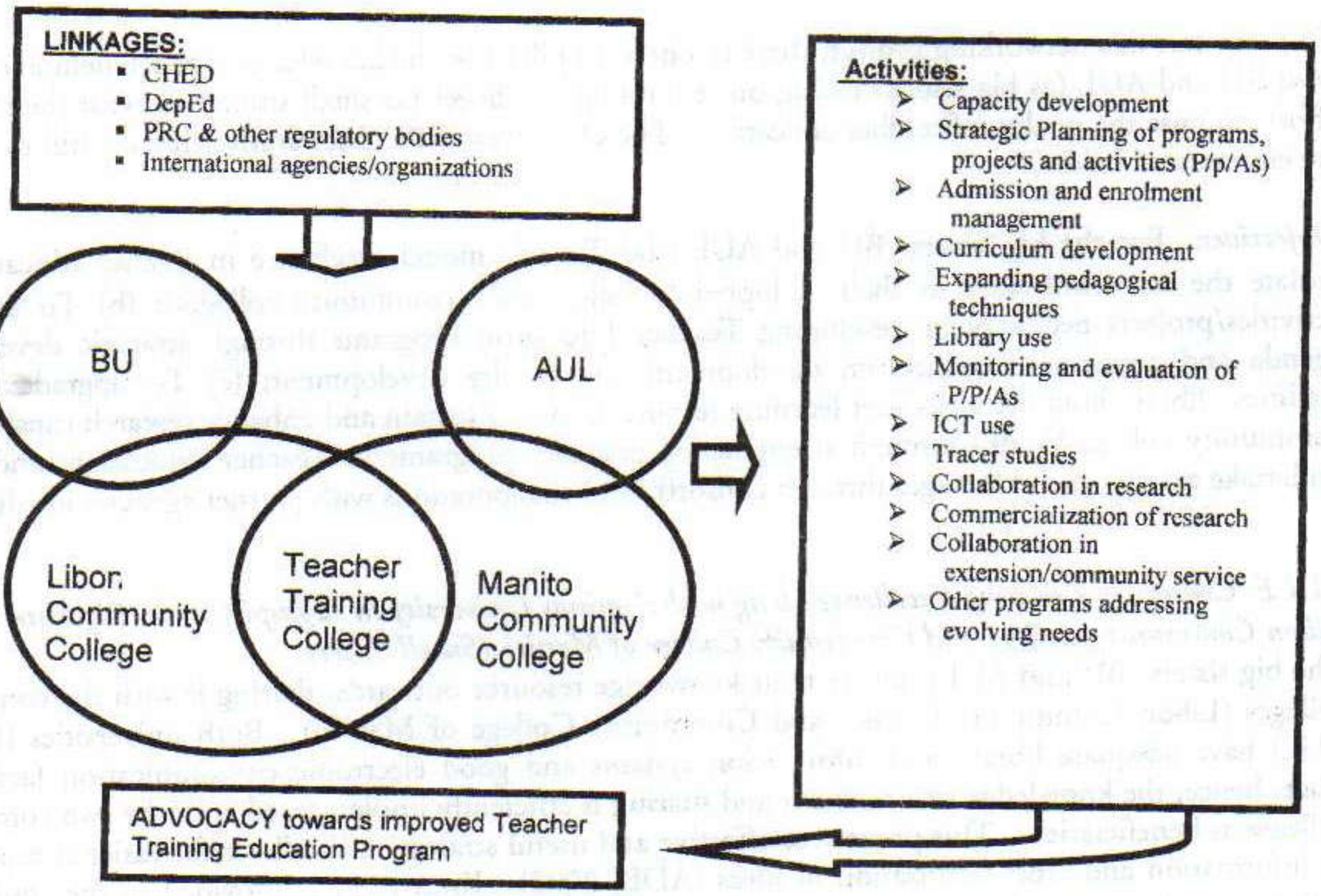


Figure 1. Big sister – Small sister Relationship Model

Reflection-in-action is an embedded practice in the pilot testing of the model. The implementers (BU and AUL) continue to document accomplishments as well as obstacles in the conduct of the study for at least two years (2009 to 2011).

CONCLUSIONS AND NEW POSSIBILITIES

The observations collected by the implementers of the program affirm their position that synergy approach through the "big sister – small sister" relationship model will bring about a positive gain particularly in raising the quality of teacher education in the community colleges. Capacity building, through mutually shared human resource was the initial step undertaken by the two universities to strengthen their academic programs. Curriculum development focused on constructivist curriculums, have been undertaken to strengthen the theoretical and pedagogical grounding of the faculty of both universities. The study being in progress, considers new possibilities that may be introduced as next steps towards accomplishing two things: (a) To empower the community colleges to improve themselves and to raise their level of performance in the licensure examination, and (b) to encourage intensive involvement of the two community colleges and their stakeholders in improving themselves.

- Formalize a networking structure with defined central nodes and sub-nodes.
- Design formal and nonformal continuing personnel development programs for faculty and nonteaching staff of both the central nodes (universities) sub-nodes (private colleges and community colleges).
- Adoption of technology-enhanced constructivist-oriented learning activities.
- Use educational technology in instruction including use of instructional friendly assessments
- Development of computer adaptive testing (CAT).
- Use of internet-based instruction in advanced studies as mode of instructional delivery.
- Multimedia instructional materials production for use in pre-service and in-service teacher-training.
- Conduct of action researchers by faculty to improve their own teaching.
- Improved Licensure Examination performance through practice test/review materials development.
- Forge linkages through consortia and collaborations with foreign and local partner agencies.
- Update library collection with the inclusion of print and electronic media.

The cost of the expanded services of the two universities, particularly the use of technology-enhanced instruction will be a matter to be equitably settled between the big sisters and small sisters.

REFERENCES

Cabredo, S. C. & Jenkin, F. A. A synergy approach to facing the challenges of quality and relevance of higher education in Albay Province. Paper presented in the *9th SEAAIR Conference* on October 13-15, 2009, Penang Malaysia.

Chambers, E. (2003). *Collecting and Interpreting Qualitative Materials*. Applied Ethnography in Norman R. Denzin and Yvonna S. Lincoln (eds.). Thousand Oaks: Sage Publications.

Fraenkle, J. R. & Wallen, N. E. (2006). *How to design and evaluate research in education* (6th ed.). Boston: McGraw-Hill International Edition.

National Economic Development Authority (NEDA). (2008). *Updated regional development plan, Region V.*

The Presidential Task Force for Education. (2008). *The Philippines main education highway: Towards a knowledge-based economy.* Manila: Office of the President.

SEAAIR
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COMPARING MQA AND AUQA REQUIREMENTS TO EVALUATE THE POSSIBILITIES OF GLOBAL STRATEGIC ALLIANCES IN HIGHER EDUCATION

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ABSTRACT

This paper discusses the requirements of the Australian Universities Quality Agency (AUQA) and those of the Malaysian Qualifications Agency (MQA). Although the former is quality-based and the other accreditation-based, the MQA also produces a Code of Practice for Institutional Audits (COPIA) in addition to the Code of Practice for Programme Accreditation (COPPA). The purpose of COPIA is to evaluate the readiness of universities in Malaysia to be bestowed with self-accreditation status. In a sense, it is indeed quality-based and comparison with AUQA requirements is perfectly valid. It is argued in this paper that if the requirements are comparable and that one set is used in a developed country and the other in ASEAN, strategic alliances between higher education institutions in the two global regions are probable provided all the requirements are met respectively. Interesting differences between the two requirements are identified and discussed. It is observed that the intended use of COPIA tends to lean towards the fitness for use as basis of AUQA requirements.

Keywords: Quality, qualifications, accreditation, higher education, strategic alliances, fitness for use

INTRODUCTION

The Australian Universities Qualifications Agency (AUQA) was established in the year 2000 by the Australian Ministerial Council on Education, Training and Youth Affairs in order to ensure the quality and standards of university programs in Australia. Part of the impetus for such a move was the opening of Australian higher education to international students which began about 10 years earlier.

Unlike other similar agencies elsewhere, AUQA was not set up to accredit programs and courses. Such accreditation in Australia is carried out by professional organizations such as the Institution of Engineers, Australia; the Australian Medical Association; and the like.

As can be seen from its website http://www.auqa.edu.au its major functions are as follows:

- Provide assurance of the quality of Australian universities, other higher education institutions, and territory higher education accreditation agencies; and
- To assist in enhancing the academic quality of these institutions.

Given that a number of Australian universities either have branch campuses outside the country or that their programs are being taught overseas, AUQA, therefore, also carries out quality audits at those branch campuses or overseas establishments where those programs are taught.

Later on, AUQA developed a certification system to allow the acceptance of audits done by other agencies. This, therefore, reduces duplication and unnecessary costs of audits by AUQA.

Regional and global meetings on the quality of universities and their programs led to a regional collaboration(s) of higher education quality agencies thus producing a common standard of higher education quality in the region. The Brisbane Communiqué released by 27 Ministers of Education from around the Asia-Pacific region is one example (DEEWR, 2008).

In essence, however, AUQA's audits are basically what could be called *fitness for purpose* or *fitness for use* audits which validate and verify claims by universities of their achievements, processes, and so on.

In Malaysia such an agency is in its incipient stage. The LAN (*Lembaga Akreditasi Negara* or The National Accreditation Board) was set up in 1997 to approve the offering of higher education programs by private higher education institutions in the country. The Public universities' accreditation and standard were administered by the Quality Assurance Division of the Ministry of Higher Education.

Partly in response to comments of discrimination against private higher education institutions and the continuing need to further improve the quality of public universities in the country, the Malaysian government decided to have both public and private higher education institutions come under a common qualifications agency, now called the Malaysian Qualifications Agency (MQA). The MQA was established in 2007.

While LAN only had panels comprising professors and senior officers of public universities, MQA invited professors and senior officers from private higher education institutions to join their audit panels.

As these audits are based on program disciplines they are, therefore, *Standards-based.* This is further evidenced by the document used for their audits, namely the COPPA (Code of Practice for Programme Accreditation). It is possible that this may turn towards *fitness for use* –based audits in the future. This promising development is potentially evident from the fact that for each of its nine areas of interest, there are only two standards, namely the *Benchmark* and the *Enhanced* standards. The former is mandatory and, therefore, must be met by all institutions while the latter attracts a bonus in the accreditation, provided the relevant benchmark standards have been met.

The MQA also produced another code of practice called COPIA (Code of Practice for Institutional Audit) which audits the institution's quality system. The successful audit of an institution will allow it to self-accredit its academic programs. This clearly leads to a situation very similar to that in Australia and other developed countries.

As a consequence, this would facilitate any global strategic alliances not only in the auditing processes but also in terms of program and course recognition allowing substantive credit transfers of courses between programs offered in Malaysia in this case and Australia, or between a developing country and a developed country.

This paper discusses the practices of the two agencies above and comments on what else needs to be done in order to realize the global strategic alliances in higher education in both countries.

Table 1 shows a comparison between AUQA and MQA in selected areas to highlight significant differences as well as similarities. Obviously Table 1 above is not exhaustive, however, further drilling into the AUQA and MQA characteristics is not considered to add significantly to information required in order to make comparisons between the two agencies.

The University Management Environment.

While the AUQA and MQA rules and regulations provide objective measures, the quality of an organization depends on many other factors, some of which may not be as objective as those rules and regulations. These include the University management styles and practices which may affect the management environment of the institution, either positively or negatively.

The author's observation over some 20 years in higher education in Australia and several years in Asia showed that there are differences in the management styles of their HIEs and that these appear to affect the implementation of changes including the infusion of quality and accreditation.

In Malaysia, the establishment of the Higher Education Leadership Academy of the Ministry of Higher Education recognized this observation. Its recent publication (AKEPT, 2010) carries a couple of chapters that attest to the above (Hong, 2010; Siew, 2010). Hong (2010) clearly stated that "Leading academics has been likened to 'herding cats', yet the strength of HEIs lies in the independent thought, creativity and autonomy of the people who work in them". This is obviously the greatest challenge in Asian universities management to resolve in order to have meaningful strategic alliances with universities from the developed world. Siew (2010), on the other hand, compared one of Universiti Malaya's Vice-Chancellors against the Head of a successfully transformed British Institute and basically found a number of leadership similarities. However, there were also differences. In the former, it was the introduction and implementation of the ISO 9001:2000 standards while the latter involved the amalgamations of a number of institutions which therefore entailed external as well as internal personnel.

Table 1

Descriptions of the Australian Universities Quality Agency and the Malaysian Qualifications Agency (AUQA and MQA websites)

AUQA	MQA
Set up in 2000 by Australian Ministers of Education Council.	Set up in 2007 by the government of Malaysia Amalgamated LAN (National Accreditation Board) and QAD (Quality Assurance Division of the Ministry of Higher Education (MOHE)). → brings to one body the accreditation and quality assurance of programs in both Public and Private HEIs.
Independent body with own Board of Directors, Constitution and not controlled by any governments.	Intended as an independent body. Audit Panels comprise staff from both Public and Private universities.
Is the principal national quality assurance body for higher education in Australia.	It is the only qualifications accreditation body in Malaysia, although in many cases working in conjunction with professional bodies, such as the Institution of Engineers, Malaysia's *Engineering Accreditation Council (EAC).*
Its main responsibility is to provide assurance of the quality of Australian universities, other higher education institutions and state and territory higher education accreditation agencies through audits conducted in five year cycles.	Two Codes of Practice (COP): 1. COPPA (COP on Programmes Accreditation) 2. COPIA (COP on Institutional Audit) Thus MQA does both the accreditation of programmes as well as providing quality assurance assessments.

Assists in enhancing the academic quality of these institutions and organisations through training seminars, workshops and publications.	Seminars mainly only on awareness of the Malaysian Qualifications Framework, but does not provide training seminars like AUQA.
Cooperates with other quality assurance organisations in Australia and abroad on matters relating to quality assurance, including cross-border quality assurance, and the transfer of knowledge about these processes.	Generally cooperates with leading Qualifications Agencies around the world. Indeed the MQ Framework is based on those from Australia, UK and New Zealand. Currently MQA is actively involved in regional Quality in Higher Education activities and is therefore co-operates with both regional and global organizations in this respect.
AUQA's audit method evaluates aspects of an institution's quality assurance arrangements on the following dimensions: Objectives, Approach, Deployment, Results and Improvement, or OADRI.	COPPA: evaluates and accredits programmes COPIA: evaluates the quality system of the institution to allow it to be given self-accreditation status. Thus although COPIA appears to be approaching the principles of AUQA, its basic measure is still accreditation.
AUQA does not impose an externally prescribed set of standards upon auditees, but uses as its primary starting point for audit each organisation's own objectives. AUQA considers the extent to which institutions are meeting these objectives, and how institutions monitor and improve their performance.	MQA has *Benchmark* and *Enhanced* Standards to be met by programs and institutions in order to gain accreditation and the self-accreditation status respectively.
AUQA bases each audit on a critical self-review (also referred to as self-evaluation, self-audit or self-study) by the institution or agency subject to the audit. AUQA looks for evidence that institutions have considered the purpose and intentions of the relevant external reference points and taken appropriate and effective action, such as the National Protocols for Higher Education Approval Processes and the Australian Qualifications Framework (AQF) *as well as the* Department of Education, Science and Training's Handbook for Quality Audits of Higher Education Providers.	MQA uses institutions' submissions which should provide evidence of meeting the two Standards aforementioned. MQA's audits are based on a much constrained basis of the COPPA and COPIA. It is possible of course that the institution would have done an environmental scanning that help its programmes and quality that may be reflected in their responses to the Standards and other questions.

Management styles are also affected by a number of other factors that would need to be further researched in order to enhance confidence in including them in discussions on this matter. For example, other than perhaps Thailand, South East Asian countries have been colonized by several Western and Eastern powers prior to independence. While it is not the purpose of this paper to discuss this aspect, it is nevertheless important that we consider it. Cultural aspects are yet another factor. For example, the need to defer to elders and authority may slow down important changes in university management at best and stop them altogether at worst.

Idrus (2004) discussed some of these aspects. It is clear that Asian universities, while able to meet the formal or objective measures of effectiveness through the rules and regulations such as COPPA and COPIA in Malaysia and BAN-PT in Indonesia, the necessary changes to effect a workable strategic alliances between universities in a developing country and those in developed countries would still be obstructed by the incompatible management environment or styles in the respective countries. Recent development in Indonesia (DIKTI, 2010; Aminuddin et al., 2010) however gives positive hope in pursuing such alliances. For example, Indonesia embarked on massive changes to the management of their public universities in 2000 by transforming some of their public universities into what is called *State-Owned Autonomous Legal Entity* (SOALE). They are empowered to elect their President/Vice-Chancellor/Rektor who is then expected to empower the academic leaders such as Deans, Heads of Academic Departments, Directors of their research institutes, and so on. Aminuddin et al. (2010) reported that 10 public universities in Indonesia have now been transformed into SOALEs, with at least one of them now receiving only 30 percent of its budget from the government. It is not clear whether the Indonesian government has a plan to transform all of its public universities/higher education institutions into SOALEs and when this will be completed.

Global and Regional Moves in Qualifications and Quality in Higher Education

In the meantime, there are developments in other parts of the world which may not be exactly the same as those elsewhere. Regionally within Asia-Pacific, efforts are on-going to create standardized and interchangeable protocols, e.g. APQN (Asia-Pacific Quality Network) (APQN, 2008; APQN, 2010).

In specific professional areas such as Engineering, global standardization and recognition are being carried out through protocols such as the Washington Accord and the Sydney Accord. Standardization across Europe has also been on-going, e.g. Bologna Protocols. Several projects are on-going between European universities and Asian universities through various European Union (EU) agencies of which *Erasmus* is well known in Asia.

Potential Trends in the Near Future

It seems clear that differences between higher education around the world are disappearing due to increased mobility of both students and academics; the provision of research funds particularly to attract interests in Asia of say European higher education and universities and in Malaysia in particular; and the *twinning* system of overseas and local universities.

Of course other facilitating factors, such as the internet, social networking, increasingly more sophisticated websites, and the like will help further awareness of many aspects of higher education in Asia and elsewhere with the result that strategic alliances could be realized.

DISCUSSION

It is obvious that certain parts of the developed world are still sorting out aspects of their universities in order to effect strategic alliances, although those in the Asian countries appear to have more challenges to resolve that include cultures, beliefs and practices. Further research would be required on other aspects alluded to earlier.

CONCLUSION

Comparing AUQA and MQA requirements highlighted differences and potential differences between the quality and accreditation practices in developed and developing countries. This would assist in establishing protocols that would help universities in those countries to achieve strategic alliances in academic as well as research collaboration to the benefits of the world as whole.

This paper also proposed looking at higher education management both styles and environment that are not specifically covered by the Agencies' requirements and rules, but are nevertheless pivotal in any strategies.

REFERENCES

AKEPT. (2010). Leadership in Higher Education: Framing the FUTURE, R Yusof and A Zainuddin (Editors), Higher Education Leadership Academy, Ministry of Higher Education, Oxford-Fajar publishers, Kuala Lumpur, Malaysia

APQN. (2008). Quality Assurance Arrangements in Higher Education in the broader Asia-Pacific Region, A report prepared for DEEWR

Asia-Pacific Quality Network. (2010). *Enhancing Quality of Higher Education in the Developing World* Conference 3-5 March 2010 held in Bangkok, Thailand.

Australian Universities Quality Agency. (2010). Retrieved May 2010, from http://www.auqa.edu.au

Directorate General for Higher Education, Govt of Indonesia (DIKTI). (2010). Retrieved May 2010, from http://www.dikti.ac.id

Hong, K. S. (2010). *Leadership Strategies for Fostering Knowledge Processing in Higher Education Institutions,* Chapter 2 in AKEPT 2010, pp. 16-32

Idrus, N. (2004). Education reform – A look at Asian perspectives. *Journal of Institutional Research in South East Asia*, 2(2), 5-17.

Malaysian Qualifications Agency (MQA). (2010). Retrieved May 2010, from http://www.mqa.edu.my

Siew, H. O. (2010). *Leadership of Change to Create Excellence in Academia: A Comparative Study of the Achievements of Babraham Institute and the University of Malaya* Chapter 6 in AKEPT 2010, pp. 100-128.

Zuhairi, A., Riana, K. E., Maria, M. & Sawitri, H. H. (2010). An exploratory study of cost management and economics of higher education institutions in Indonesia. *Journal of Institutional Research in South East Asia*, 8(1), 8-22.

RESEARCH CLIMATE IN THE ASSOCIATION OF SCHOOLS OF AUGUSTINIAN SISTERS IN THE VISAYAS

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ABSTRACT

Academic institutions, as laboratories for learning, should keep pace with the ever-changing world at the same time it has to deliver its threefold functions, namely, instruction, extension and research. Research is a necessary component in every higher education discipline. It enriches the discipline and makes it relevant to the needs of the time. Educators should not cease to become procreators of knowledge; not just contented users of long time ago knowledge. This paper presents the research climate of the six schools run by the Augustinian Sisters of Our Lady of Consolation in the Visayas region of the Philippines. Teachers and administrators feel that there is a very high need for capability building in the field of research. The overall research climate in the schools along with their research orientation and support system for research, is moderately adequate while their research knowledge is not so adequate. Their need for building research capability does not significantly vary. However, their orientation, knowledge, and support system for research significantly vary, thus, leading to significantly varying research climate. There is, therefore, a need to establish functional policies, financial, material, and technical support for faculty and personnel who are motivated and interested to conduct researches. The study strongly recommends that sharing of best practices, and collaboration among the six schools as well as with other higher education institutions be explored.

Keywords: Higher education, research, research climate, research capability

INTRODUCTION

Research, as a necessary component in every higher education discipline is of primary interest to institutional researchers and planners, faculty, college and university administrators, student personnel specialists, and behavioral scientists (Airweb, 2010). It enriches the discipline and makes it relevant to the needs of the time. Not only confined in education, research is also the driving force of most developments in various disciplines such as science and technology, medicine and health, social sciences, and business and industry (Calmorin & Calmorin 1995). Research can be applied to anything, from corporate to personal affairs, big or small. Research widens our horizon, extends our vision and experiences giving us explanations why and how a situation exists. It enables us to discover new things and ideas.

As laboratories for learning, academic institutions have to keep pace with the ever-changing world addressing the three major concerns of instruction, extension, and research. The Department of Education (DepEd) and the Commission on Higher Education (CHED) are encouraging people in the academe not just to be research users but rather research producers. This has been reiterated in several

seminar workshops where CHED representatives were given the opportunity to talk. In order to promote research capacity relating to teaching and learning the priority is to develop a teaching and learning research-oriented consciousness among staff (D'Andrea & Gosling 2000).

La Consolacion College Bacolod like any other higher education institutions aim that all teachers have to do research. It is for this reason that the researchers conducted this investigation to help not only LCC Bacolod but also its sister schools in the Association of Schools of Augustinian Sisters (ASAS) Visayas.

Problems

To describe the research climate of ASAS-Visayas, answers to the following questions are needed:

1. What is the extent of ASAS-Visayas Schools' appreciation of the need for research?
2. How adequate are ASAS Visayas Schools' research orientation, research knowledge, support system for research, and over-all research climate?
3. Is there a significant difference in the appreciation for research need, research orientation, research knowledge, support systems for research, and overall research climate of ASAS-Visayas Schools?

Hypothesis

It was hypothesized that there is no significant difference in the appreciation for research need, orientation, knowledge, support systems and over-all research climate among ASAS-Visayas Schools.

CONCEPTUAL FRAMEWORK

The MODERN TEACHER (Model, Obedient, Dedicated, Economical, Resourceful, Nobel – Talented, Efficient, Active, Honest, Effective and Research-Oriented) who introduces innovations not only in returning to the basics but also doing the right conduct, rational thinking, and research (Calmorin & Calmorin 1995). It further stated that such innovation calls for educators to go back to the basics based on research because researches serve to improve instruction as well as teacher's competence. This study assessed the research climate of the six ASAS-Visayas schools through an eclectic approach for making decisions as regards to the reactivation of research function. This gave direction for improvement of their research centers (research function). The assessment content borrowed the Context-Input-Process-Product (CIPP) decision making model of Stufflebeam (Stufflebeam & McKee, 2003). It reviewed the research orientation, research knowledge, and support system for research.

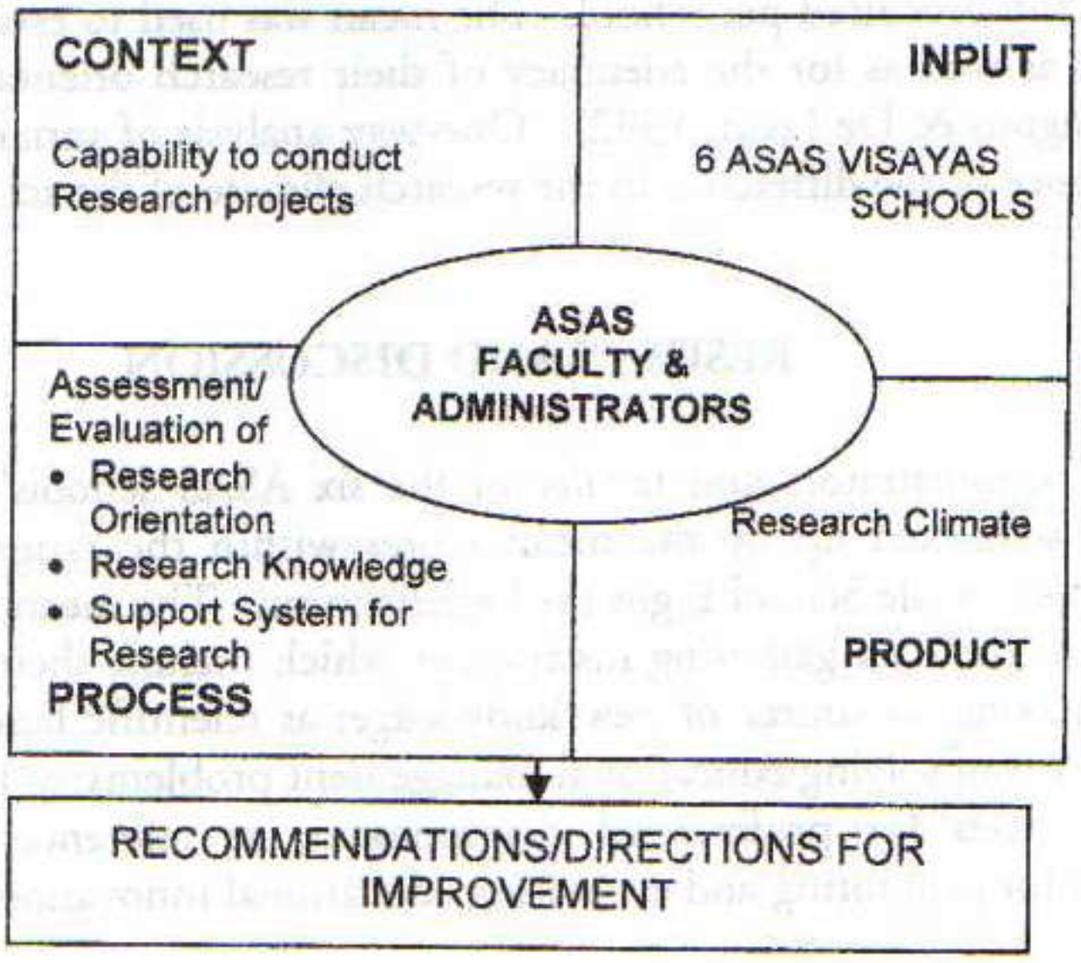


Figure 1. Schematic diagram

Research climate in the research environment of ASAS Visayas Schools includes the research need, research orientation, research knowledge of their faculty and staff, as well the support system afforded by the administrators to those who conducted and will conduct researches. Research Need refers to the appreciation of the ASAS administrators and faculty of a need for research results as basis for action, innovation, development, and decision making. Research orientation refers to the administrators' and faculty's capability, aptitude, and contribution to the studies conducted by the institution. Research Knowledge covers the administrator's and faculty's understanding of the research process from problem identification down to report preparation and their ability to put such knowledge into application. Research Support System includes the availability of infrastructure, human and materials resources for the conduct of scientific studies.

Results of this study are of great help to the ASAS-Visayas Superintendent and the technical committee on research in coming up with research training and/or management program to be included in the three or five-year development plan. Once the plan will be implemented, it will help improve quality of instruction.

METHODOLOGY

This research undertaking was conducted in the ASAS-Visayas Region. The six schools covered are geographically scattered in Cebu specifically Lilo-an (Holy Child School – School A) and Danao City (Santo Tomas Academy-School B); Negros Oriental particularly in Bais City (Sacred Heart Academy-School C), and Negros Occidental in the municipalities of Isabela (La Consolacion School–School D), Murcia (La Consolacion Academy-School E), and the city of Bacolod (La Consolacion College (Main Campus and Gardenville Campus-School F).

The survey questionnaire used was adapted from Ciriaco (1998), however, the first part which asks for the profile of the respondents was modified to suit to this particular study. There were 233 respondents which included the deans, principals, department heads, coordinator of students' affairs, and faculty members.

The data were statistically processed per school. The mean was used to establish the schools' appreciation of a need for research as well as for the adequacy of their research orientation, knowledge, and support system for research (Pagoso & De Leon, 1992). One-way analysis of variance (Padua, 2000) was used to determine the significance of the difference in the research climate of the six ASAS-Visayas Schools.

RESULTS AND DISCUSSION

Research Need. The administrators and faculty of the six ASAS schools' appreciation of the need for research is very high as backed up by the mean scores within the range of 4.23 to 4.51. School F registered the lowest mean while School E got the highest mean. The mean scores recorded by each school is based on the items in the data gathering instrument which include their need for research as basis for planning and policy making; as source of new knowledge; as scientific bases for evaluating teaching and learning process; as means of solving educational management problems; as bases of organizational changes and development; as bases for professional development; as reference for producing materials for development and bases for promoting and evaluating educational innovation.

The Ministry of Education in Canada (2009) claims that research is essential in a modern education system. It helps the ministry develop policies and programs and teachers to improve student outcomes. Moreover, Nooteboom and Stam (2008) affirm the above result when they said that the social significance of research is not self-evident. With fundamental research we have to wait and see whether it will bring social benefits. Nevertheless, there are social problems that have to be solved and that cannot wait until science spontaneously offers a helping hand. Therefore, programming of at least a part of fundamental research is necessary.

Table 1
ASAS Schools' Research Need

Institution	Mean	Interpretation
A	4.27	Very great extent
B	4.38	Very great extent
C	4.32	Very great extent
D	4.48	Very great extent
E	4.51	Very great extent
F	4.23	Very great extent

Research orientation. Of the six schools only School F registered an adequate research orientation (mean=3.42). Five schools revealed moderately adequate research orientation with mean scores between 2.81 (School E) and 3.35 (School D). Their research orientation is based on their faculty members' and administrators' ability, aptitude, and preparedness to conduct either historical, descriptive, experimental, or other types of researches.

Oliver (2005) avers that teacher-as-researcher movement, recognizing teacher knowledge and experience, aims to empower teachers. Oliver further adds that teacher research reframes teachers as knowledgeable professionals who through their classroom work are able to construct knowledge about teaching and learning as schools begin to develop a "knowledge base for change".

Table 2
ASAS Schools' Research Orientation

Institution	Mean	Interpretation
A	2.92	Moderately adequate
B	3.11	Moderately adequate
C	3.24	Moderately adequate
D	3.35	Moderately adequate
E	2.81	Moderately adequate
F	3.42	Adequate

Research knowledge. Overall, research knowledge of the six school is "not so adequate" with a mean of 2.55. Only School F showed a moderately adequate knowledge (mean=2.92). Lowest mean (2.41) was noted in School A.

Table 3
ASAS Schools' Research Knowledge

Institution	Mean	Interpretation
A	2.41	Not so adequate
B	2.43	Not so adequate
C	2.41	Not so adequate
D	2.55	Not so adequate
E	2.59	Not so adequate
F	2.92	Moderately adequate

The Directorate for Education (2008) of the Organization for Economic Cooperation and Development (OECD) claims that defining research and measuring its output has become a somewhat controversial issue, as questions are being asked about which institutions should do research and what kind of research should they do. In addition, Galloway (2004) avers that there has been a growing mismatch between what many quantitative researchers are able to do and what they are able to understand. Although this growing mismatch has been felt in such scientific disciplines as political science, anthropology, and sociology, nowhere has the effect been more pronounced than in the field of educational research, which has traditionally produced some of the most poorly designed quantitative research studies of all.

Research support system. All schools proved to have moderately adequate support system for research as revealed by their mean scores within the range of 2.99 to 3.38. School E showed the lowest mean (2.99) while School F recorded the highest mean (3.38). Taken collectively, the mean score of the six schools was 3.165.

The CHED's focus on research is supported by OECD (2008) with its statement that policy focus is increasingly on resource allocation for research and development, the formation of human/intellectual capital through education and training.

Lewin (2007) cited that political struggles have enveloped the research assessment exercises (RAE) to interpret United Kingdom's current funding council model of governance. Ironically, the apparently widespread improvement in the research performance of British universities, as demonstrated by RAE 2001, has made it more difficult to distribute research income selectively, which was supposedly the central objective of the whole evaluative process While enhanced research ratings may be seen as a cause for celebration in the universities, the failure to anticipate this outcome and, more significantly, to plan for its financial implications is seen in political circles as a failure of higher education management.

Table 4
ASAS Schools' Support System for Research

Institution	Mean	Interpretation
A	3.22	Moderately adequate
B	3.21	Moderately adequate
C	3.11	Moderately adequate
D	3.08	Moderately adequate
E	2.99	Moderately adequate
F	3.38	Moderately adequate

Overall research climate. All the six schools have a moderately adequate research climate supported by mean scores between 3.21 and 3.49 resulting in an over-all mean of 3.31. School A got the lowest mean (3.21) while School F had the highest mean (3.49). School F revealed to have the highest overall research

climate because in terms of college population, it has the biggest enrolment, thereby also having the most number of college faculty member. School F is also the only school which has a well defined research policies, and a functional research office with fulltime personnel assigned. The other five schools assigned the research function to the academic coordinator, the principal or the guidance office.

Through addressing the knowledge management processes and strategies used by research universities and identifying critical success factors, higher education leaders will be better equipped to restructure organizational processes, thereby enhancing quality. Colleges and universities, thus, will be in the strategic position to retain their institutions' position as a leading knowledge creator, manager, and disseminator of scholarly knowledge (FAU, n.d.).

However, above results are opposite to a press release from the U.S. House Science and Technology Committee citing Senator Mikutski saying that "America's research universities are powerhouse of innovation, incubators for the ideas and breakthrough that have made America an economic superpower and that America is home to most of the best research universities – but other nations are catching up" (Spaceref, 2009).

Table 5
ASAS Schools' Over-all Research Climate

Institution	Research need	Research orientation	Research knowledge	Support system	Over-all research climate	Interpretation
A	4.27	2.92	2.41	3.22	3.21	Moderately adequate
B	4.38	3.11	2.43	3.21	3.28	Moderately adequate
C	4.32	3.24	2.41	3.11	3.27	Moderately adequate
D	4.48	3.35	2.55	3.08	3.37	Moderately adequate
E	4.51	2.81	2.59	2.99	3.23	Moderately adequate
F	4.23	3.42	2.92	3.38	3.49	Adequate
All 6	4.37	3.14	2.55	3.17	3.31	Moderately adequate

Differences in research climate. When the research climate of the six schools were compared, over-all research climate significantly vary ($p < .05$). The need for research of the six schools do not significantly vary ($p > .05$). Their research orientation, knowledge and support system significantly vary ($p < .05$). This result may be attributed to the programs offered by the schools where only School F offers tertiary programs for more than a decade while schools A to E have just started their tertiary programs and that teachers in the basic education are not required to do researches while tertiary level teachers are obliged to come up with research outputs.

SUMMARY

The study highlighted that ASAS-Visayas schools have a very high need for research. Of the six ASAS-Visayas schools, only one school has adequate research orientation and research knowledge but its support system for research is moderately adequate. Five ASAS-Visayas Schools have "not so adequate" overall research climate. This can be attributed to their being new in tertiary education though the schools have been existing for more or less two decades. Their main focus is on basic education of which research is not given so much emphasis.

The appreciation of a need for research in the six schools did not vary significantly. However, their research climate varied significantly as supported by a significant difference in their research orientation, research knowledge and support system for research. This can be due to the fact that only one school has a functional research office complemented by clear-cut research policies and implementing guidelines. Five

schools have research offices which mainly focus on evaluation of teaching performance of faculty as well as personnel performance evaluation. These are functions which should have been assigned to the human resource office.

RECOMMENDATIONS

There is a need for the superintendent of ASAS-Visayas together with the Technical Committee on Research to regularly (semestral or annual) conduct trainings/seminar-cum-workshop on research to improve the research orientation as well as enhance the research knowledge of the schools. Financial, material and technical support and assistance should be afforded by ASAS-Visayas to their faculty and personnel who are interested, motivated, and willing to do researches.

Schools with research unit/center have to reactivate the research function and review then update their research thrust and program. On the other hand, for schools without a research unit/center, the research function can be incorporated in their principal's, guidance or any office/unit which they deem appropriate or suited to implement their research program.

It is also strongly recommended that sharing of best practices, collaboration and/or partnership among the six schools as well as with other higher education institutions be explored.

REFERENCES

Calmorin, M. A. & Calmorin, L. (1995). *Methods of Research and Thesis Writing.* Manila: Rex Bookstore.

Ciriaco, J. (1998). Unpublished Doctoral Dissertation. USLS, Bacolod City.

Commission on Higher Education. (2001). *Higher Education Research Papers, Vol. 1, 2001.*

D'Andrea, V. & Gosling, D. (2000). Promoting research in teaching and learning in higher education: Two case studies of multi-disciplinary pedagogic research. Retrieved May 15, 2010, from http://www.tlrp.org/pub/acadpub/Dandrea2000.pdf

Directorate for Education. (2008). Univ*ersity research management: Developing research in new institutions.* Organisation for economic cooperation and development. Retrieved May 7, 2008, from http://www.oecd.org/document/37/0,3343,en_2649_35961291 _35536165_1_1_1_1,00.html

Four congressional leaders ask national academies to assess condition of research universities. (n.d.). Retrieved: May 15, 2010, from: http://www.spaceref.com/news/ viewpr.html?pid =28582

Galloway, F. J. (2004). *The secrets behind producing meaningful quantitative research: What every foundation officially really needs to know.* University of San Diego. Retrieved May 11, 2008, from http://www.luminafoundation.org/ research/foundation galloway.pdf

Lewin, N. (2007). *Governance of higher education in Britain: The significance of the research assessment exercises for the funding council model.* Retrieved May 11, 2008, from http://eprints.soton.ac.uk/45923/

Nooteboom, B. & Stam, E. (2008). Microfoundations for Innovation Policy'. Amsterdam University Press. Retrieved: May 10, 2008, from http://www.bartnooteboom.nl/site/img/klanten/250/Researchhigher education & innovation.pdf

Oliver, A. (2005). The TLRI: *Teachers' perspectives on partnership and research. Teaching and learning research initiative.* Retrieved May 20, 2009, from http://www.tlri.org. nz/assets/discussion-paper-pdfs/teachers-perspectives.pdf

Overview of research in higher education. (2010). Association for Institutional Research. Retrieved May 15, 2010, from http://www.airweb.org/?page=89

Padua, R. N. (2000). *Elements of research and statistical models.* Cagayan de Oro City, Philippines: MPSC Publishing House.

Pagoso, C. M. &. Guerrero De Leon, C. (1992). *Fundamental statistics for college students.* Manila, Philippines: Sinag-Tala Publisher.

Research in Education. (2008). *Queen's pinter for Ontario.* Ministry of Education of Canada. Retrieved May 20, 2009, from http://www.edu.gov.on.ca/eng/ research/

Stufflebeam, D. L., McKee, H. & McKee, H. (2003). *The CIPP model for evaluation.* Western Michigan University. Retrieved May 10, 2008 from http://www.wmich.edu/evalctr/pubs/CIPP-ModelOregon10-03.pdf

Significance of research in higher education. (n.d). Retrieved May 11, 2008, from http://www.fau.edu/ecou1533/significance.html

THE ENHANCEMENT OF LEARNING THROUGH PROBLEM-BASED LEARNING AND INQUIRY (PBL) METHOD TO IMPROVE STUDENTS' HARD SKILLS AND SOFT SKILLS

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ABSTRACT

Students are the most valuable assets of the university. Development of intellectual capital and mind shift of the students are one of big challenges. Widyatama University, especially accounting department, intends to develop a knowledgeable-based economy. So we realize that development of intellectual capital should be put into a priority. In the context of International Education Standards, personal competency is an important thing. As such university is systematically accelerating the development of quality intellectual capital. In the recent launching of soft skills in Widyatama University, some soft skills and the strategies undertaken to infuse them into the curriculum of higher education are identified. This paper gives an overview of implementing one of soft skills approach. The objective of the study is to examine the implementation of problem-based learning and inquiry (PBL) to the students' soft and hard skills. The samples of the study were accountancy students who have taken Financial Accounting such as principle, intermediate, and advanced accounting. The data were collected using purposive sampling approach. The result of the study indicates that the soft-skill approach is potentially successful to develop student performance.

Keywords: Soft skills, problem-based learning

INTRODUCTION

In the workplace, accountants facing the move to International Financial Report Standard (IFRS) will need technical training, but their biggest challenge may be mastering the soft skills such as judgment, critical thinking and analysis, integrity and openness, as well as how to make transparent disclosures (Leone, 2008). Leading accounting researchers and partners in major public accounting firms have increasingly called for adjusting accounting education to reflect the realities of the current work environment as another way to create accounting professionals (Beresford, 2005; Wyatt, 2004). In the context of an International Education Standards, personal competency is an important thing. One of the essential personal competencies is problem solving analysis. Every company has different characteristics, thus we need a good ability to analyze.

One of the Accountancy Program visions is to produce professional human resources in the field of Accounting. To achieve this learning process, especially Financial Accounting, it is essential to produce graduates with expertise in the field of Accounting. Principle of Accounting, Intermediate Financial Accounting, and Advanced Financial Accounting courses are part of the grove which is a core subject

competency of Accountancy Program. Financial Accounting is a subject which will be the basis of sustainability and capability to the next subject. In addition, this subject has a relevance and in a prerequisite for other subjects, namely: Management Accounting, Auditing, Accounting Theory, Financial Accounting Seminar, and Auditing Seminar. Thus, the graduation rate for Financial Accounting must be sufficiently high in order not to impede the process of taking another course. In addition, Financial Accounting is very important in practice.

Based on the results of questionnaires filled out by students at the end of the semester, the cluster of courses in Accounting is still viewed as a difficult subject to be understood by the students. Consequently, the study method of this subject needs to be refined in order to meet the core competencies.

Problem Identification

1. How to increase students' interest and motivate them to learn Financial Accounting?
2. How to enhance students' understanding of Accounting Financial concepts, theories, and practices?
3. How to improve students' soft skills ability of problem solving in the workplace?

Objectives of the Study

The purposes and benefits through improving the learning process are:

1. Shifting students' paradigm that the Financial Accounting is not difficult but interesting and enjoyable that enhances the understanding of Accounting.
2. Increasing the potential students' motivation to learn and think critically in mastering and understanding the materials given.
3. Creating a new method to improve students' soft skills ability.

LITERATURE

Learning

Learning is a change in behavior based on previous experience. It is a process where an activity is originated or changed by the reaction of a situation, with the condition that the characteristics of the change in activity cannot be explained on the basis of the original response tendencies, maturation, or temporary changes of the organism. It may involve processing different types of information. Learning functions can be performed by different brain *learning processes*, which depend on the mental capacities (of which are dynamic) of learning subject/agent, the type of knowledge which has to be acquitted, as well as on sociocognitive and environmental circumstances. According to the National Education Law No. 20 of 2003, learning is a process of interaction between educators and students with learning resources in a learning environment.

From the definition, it is understandable that learning happens when we change as an event and not because of changes that occur naturally or due to changes in adults that can occur by itself or because of temporary changes, but rather because, the reaction from the situation. Good learning should focus on such things as (a) improving the quality of thinking, that is, thinking in an efficient, constructive, and the wisdom to make judgments. Wisdom can be gained from the experiences of lecturers, friends' discussions, or managers who have already experienced. The learning process should be an emphasis on developing understanding, judgments, experiences, and even institutions; (b) improving the attitude of mind which emphasizes the curiosity, aspirations and discoveries. Learning is also an activity of "art" to encourage people to find something or a discovery process; (c) enhancing personal qualities which include the character, sensitivity, integrity, and responsibility; and (d) improving the ability to apply concepts and knowledge in specific situations.

Soft Skills Ability

Possible reasons for the current study further emphasize the achievement capability/expertise of their knowledge (hard skills) and affective aspects (soft skills) as the insertions; it is because lecturer assumes that the students should be independent, so they do not give affective aspects in the design of knowledge transfer and they have no systematic and methodological ability to collaborate learning with affective aspects (soft skills). Therefore, developing the following learning methods which integrate aspects of scientific ability (hard skills) with affective aspects (soft skills) is important.

1. Learning design should refer to the curriculum of study program with the learning strategies tailored to the competencies that are charged on these subjects in order to achieve the final competence, infused in its curriculum.
2. The formulation of expected competencies achieved by students after attending this course should contain two aspects, namely the ability of hard skills and soft skills.
3. Learning strategy. The exact expectation may cause students to reach (standard) the competence of this course. Lecturer has to understand the principles of learning, characteristics of learning methods, and try to implement it and evaluate the results for improvement and development.
4. Focusing on the learning process. The approach towards "competence" is not based on the "content". Learning, which focuses on the "learning process", relies on the activities of students learning from students, known as Student-Centered Learning (SCL).

Learning Methods

The variety of teaching and learning methods, which is used within a course, is an important element in creating a course which interests the students. A course with a large proportion of teaching which often takes place in lectures, will need to have a high level of intrinsic interest to students in order to keep them engaged. Various efforts are made to identify effective and efficient learning processes. Some methods are applied to obtain teaching methods that suit their needs. In a lecture method (lecturing), the role of students in the class is very limited. Students just sit and listen to what is said by the teacher and occasionally take notes. In fact, several studies concluded that the use of lecture method l (lecturing) may hinder the study of students (Turnwald et al., 1993). Traditionally, in teaching/ learning process, the learner is expected to receive external knowledge, transmitted by teachers or books that last for a lifetime (Malderez & Bodóczky, 1999). This is called transmission approach to teaching and learning. This theory affirms that knowledge is expected to be stored in one store (books or teachers) which need to be transmitted through a media (teaching resources) to the learner for permanent storage.

Similarly, there is another approach to learning known as dialogic approach, which considers learning to be more interactive or dialogic (Skidmore & Gallagher, 2005). In dialogic approach, the information flows from the teacher to learners and back forth, as well as between learners. Additionally, this view of teaching/learning process values learning the skills of finding and using knowledge as more important than the knowledge itself. This is important for the current changing age as knowledge changes more rapidly. It is believed that learners identify features of good teaching; determine their behavior which promotes learning, as that one which starts with learner experience, existing knowledge, and beliefs; and helped them to link with new subject matter. Such teachers are said to make things interesting, personalizing, or motivating their students. In constructivist point of view, such teachers set up appropriate challenges to the learners (Fosnot, 1996).

One method of active learning is a Problem-Based Learning (PBL) method. PBL is a learning process that begins with "problem" rather than exposure/explanation of knowledge (Boud & Feletti, 1997). In PBL, problems are presented prior to the knowledge given. Problems that are presented should ask for a problem in a comprehensive, applicative, analytical and synthetic member. Learners must choose the required knowledge, learn it, and relate to the given problem.

Problem-Based Learning (PBL)

According to Wee Keng Neo (2004) there are four important parts of PBL. These essential parts are using problems as triggers, learning in a small group, learning process under the guidance of facilitators, and PBL process. Jonassen and Rohrer-Murphy (1999) that the core of PBL is a small group discussions based on a problem (trigger material) to decide what knowledge they have learned, from self study and small group discussions; to share knowledge, compare and relate what they have found/learned in the self-study; and find out if they have to cover a solid foundation, and develop skills and attitude. This reciprocal feedback between knowledge and activity is where learning occurs.

LEARNING SYSTEM DEVELOPMENT METHOD AND IMPLEMENTATION

Design Development

In the modern paradigm, teachers are considered as facilitators and mainly act as guides for their students. The teaching strategies used today must provide opportunities for self development and integrate content learned with real world experiences (Kermis & Kermis, 2008). Teaching tools such as interactive case studies, simulations and games, and teamwork have been stated to be off high importance to help accounting students adjust to the real world challenges they will face as accountants. However, these methods run the risk of allowing students to hide in the details of analysis without focusing on the process of presentation and teamwork as well as other soft skills. To succeed, a future accountant has to be prepared to deal with the challenges of establishing rapport and communicating effectively.

The design of the development of learning systems at the Financial Accounting is divided into three phases: (a) Design improvement, development, and procurement of learning media; (b) Design of repairs (output produced), which includes improvement and development of learning methods (case studies, simulations, and experiential learning); and (c) Implementation of the repair process of learning.

Steps taken to enhance the learning process, among others are as follows (Sudarman, 2007):

1. Basic Concepts. The facilitator can give the basic concepts, hints, references, or links and skills required in these lectures. It aims to make students more quickly into the atmosphere of lectures and get a "map" for accurate representation of direction and purpose of study. Furthermore, it is necessary to ensure that students get the key lecture material so there is no possibility must be overlooked by the students if they are studying independently.
2. Defining the Problem. The facilitators convey the scenario or problem in the group where students perform various activities. Group members express their opinions, ideas, and responses against the scenario to identify various kinds of alternative opinions. Each group member has an equal right to give and convey ideas in the discussion as well as documenting in writing the opinion of each in the working paper. In addition, each group should be looking for lesser known in the scenario and trying to discuss the purpose and meaning.
3. Independent Learning. After knowing their duties, they clarify the issues being investigated. Sources are referred to in the form of written articles that are stored in libraries, web pages, or even experts in relevant fields. Investigation phase has two main goals which enable students to seek information and develop understanding of relevant issues discussed in class and to gather information with one goal presented with the relevant and understandable information.
4. Knowledge Exchange. After getting the source to deepen the material in self-regulated learning steps, the next meeting is for students to discuss within their groups in order to clarify and formulate the problem group. Knowledge exchange can be done by the students through group discussion.
5. Rating. The assessment is made by combining the three aspects of knowledge and skill. Assessment of mastery of knowledge that covers all activities of the college is conducted with a final exam, midterm test, quizzes, homework, documents, and reports. Assessment of the conversation can be measured

from learning good mastery of the tools of software, hardware, or the ability to design and testing while the assessment focuses on the attitudes of soft skills activeness and participation in discussions, ability to work in team, and attendance. Weight rating for these three aspects is determined by the lecturer concerned.

Measurement of Soft Skills Problem Solving and Communication

Soft skills problem solving and communication measured by pretest at the beginning of the implementation will be re-measured by post-test at the end of the implementation through submitting questionnaires and FGDs to determine success. The measurement of scores for soft skills is done by using rubric.

Performance Indicators

The success of the teaching implementation is demonstrated by the following indicators:

1. The schedule of lectures is implemented according to plan. In one semester, 16 meetings are conducted, which consist of 1 time face-to-face lecture, 13 lectures and materials and case discussion, and 2 tests. Each meeting lasts for 150 minutes.
2. The delivery of lecture materials is in accordance with the syllabus that has been planned. Submission of materials is carried out in accordance with the syllabus, along with the assistance of taxation subjects outside lecture hours.
3. Task completion is structured in a form of case to be used as the final assignment and the taxation module in accordance with the syllabus/planned schedules.
4. Questionnaires are given to students regarding the outcomes perceived by the students after attending the course through problem-solving learning method.

Capabilities of soft skills are expected to reach the level of "good", enough to score 3 for Principles of Accounting 1 in the rubric attribute measurement problem solving, whereas for Intermediate Accounting 1 and Advanced Accounting 1, either on the level of "good" or on a rubric score of 4 on attribute measurement problem solving and communication.

IMPLEMENTATION AND RESULTS OF LEARNING STRATEGY

Implementation is done by applying methods designed IN problem solving and inquiry in one class for each course. The successful implementation of the PBL model can be seen from the student learning outcomes. Proficiency level in these learning outcomes can be in forms of hard skills and soft skills. The objectives are delivered through providing cases in the learning process on the materials/topics. This is done with the intention that after the end of this learning process, students are expected to develop good self-hard skills and soft skills.

Learning Methods

Principles of Accounting. In this course, the different methods of learning prior to the implementation of teaching grant is the template in the form of soft copy prepared by lecturers in the form of CDs. The students do their tasks by using computer. In answering each of these cases, the students should be able to justify their analysis. It is conducted to determine the extent of students' problem-solving abilities.

Intermediate Financial Accounting. To determine the problem solving and communication in the Intermediate Financial Accounting I course, students are given a group task to resolve a case, in which it should be done by each group by collecting the data from the field around the students' residence. Results or reports on the settlement of the case are submitted in the form of a financial statement which should be

ready to be presented at the focus groups discussion (FGD). Assessment of students' activity will be adjusted to the standard format with components valuation according to the rubric.

Advanced Financial Accounting. The measurement of soft skills in problem solving and communication within the Advanced Financial Accounting I course is applied in the same way as in Intermediate Financial Accounting I, differing only in terms of cases provided in accordance with Advanced Financial Accounting I. The difference between Advanced Financial Accounting I and Intermediate I is that the Advance course engages in more active communication skills, which is more likely to be expected within the students in the 5th semester, while students of Intermediate Financial Accounting I is only in the third semester.

Hard Skills and Soft Skills Measurement Results

Hard skill. Implementation of hard skills can be measured through the increase in graduation rates. While the application is done only up to the midterm test, the measurement values can be seen from the mid-term test scores to determine the increase in the students' activeness in the task and the ability to work on the problems where most of the students have shown an increase in their scores. The lecturer reports the progress before and after the implementation of their respective subjects, start with Principles of Accounting I, Intermediate Financial Accounting I and Advanced Financial Accounting I. Exercise Value Scores are given as many as four times, once before the implementation of teaching grants and three after implementation. The results of the average scores for the exercise are shown in Table 1.

Table 1
The Results of the Average Scores for the Exercise

Before implementation			After Implementation		
Principles of Accounting 1	Intermediate Financial Accounting 1	Advanced Financial Accounting 1	Principles of Accounting 1	Intermediate Financial Accounting 1	Advanced Financial Accounting 1
74,82	73,11	72,03	80,65	77,11	76,55

Soft skill. Soft skills used in the Principles of Accounting I involves a problem solving analysis while Intermediate Financial Accounting and Advanced Financial Accounting I involve the problem solving analysis and communication. The measurement of soft skills ability begins at the first meeting by giving questionnaires and FGDs to identify the extent of problem solving ability and communication analysis. This is done in order to compare the results after the implementation to see if there is an increasing problem-solving ability and communication analysis. The results of soft skills ability after implementation of the PBL are shown below:

Table 2
Results of Soft Skills Ability After Implementation of the PBL

Problem Solving Ability			Communication Analysis		
Principles of Accounting 1	Intermediate Financial Accounting 1	Advanced Financial Accounting 1	Principles of Accounting 1	Intermediate Financial Accounting 1	Advanced Financial Accounting 1
2,82	3,92	4,26	-	4,19	4,42

CONCLUSION

The implementation of teaching grants through problem solving and inquiry conducted in six meetings to the Financial Accounting cluster, resulted in an increase in hard skills and soft skills of the students. During the early stages of implementation is a critical first step for formal accounting education to address

the needs of the whole student as identified in the literature review. The intention is to help create mature professionals during their college experience so that they will be able to meet the needs of potential employers and thereby have a fulfilling life and career. The program of study is designed to accomplish this by having students take ownership of their future. Implementation of teaching grants using problem solving and inquiry conducted in Financial Accounting classes can increase students' hard skills and soft skills abilities.

REFERENCES

Beresford, D. R. (2005). Accounting Professionalism–Do we get it? Invited address to *American Accounting Association Annual Meeting.*

Boud, D. & Feletty, G. (1997). *The Challenge of Problem Based Learning*, London: Kogan Page.

Fosnot, C.T. (ed.) (1996). *Constructivism: Theory, perspectives, and practice. Vol. I.* New York: Teachers College Press

Jonassen, D. H. & Rohrer-Murphy, L. (1999). Activity theory as a framework for designing contructivist learning environments. *Educational Technology Research and Development, 47*(1), 61-79.

Kermis, G. F. & Kermis, M. D. (2009). Model for the transition from ethical deficit to transparant culture: A response to the financial meltdown. *Journal of Academic and Business Ethics, 8*(1), 12-58.

Leone, M. (2008). *IFRS requires a soft touch: If American companies plan on moving to* IFRS. Retrieved November 2009, from http//www.cfo.com/article.cfm/12626230

Malderez, A. & Bodozky, C. (1999). *Mentors courses.* Cambridge University Press

Skidmore, D. & Gallagher, D. J. (2005). A dialogical pedagogy for inclusive education. Invited address to *Inclusive and Supportive Education Congress*, Glasgow, UK.

Sudarman. (2007). Problem based learning: Suatu model pembelajaran untuk meningkatkan dan meningkatkan kemampuan memecahkan masalah. *Jurnal Pendidikan Inovatif, 2*(2), 68-73.

Turnwald, G. H., Bull, K. S., & Seeler, D. C. (1993). From teaching to learning: part II. Traditional teaching methodology. *Journal of Veterinary Medical Education, 20*(3), 148-156.

Undang-Undang Republik Indonesia No 20 Tahun 2003, tentang Sistem Pendidikan Nasional.

Wee Keng Neo, L. (2004). *Jump start authentic problem-based learning.* Jurong, Singapore, Prentice Hall.

Wyatt, A. R. (2004). Accounting professionalism-they just don't get it. *Accounting Horizon. 18*(1), 45-53

A CONCEPTUAL FRAMEWORK FOR HIGHER EDUCATION INSTITUTION CORPORATE GOVERNANCE IN THAILAND

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ABSTRACT

Corporate governance is receiving greater attention since 2001 in modern organizations as a result of disputes and frauds concealed in many large organizations. A dominating party in organizations, though with good intentions, may make wrong or ineffective decisions because they do not adhere to opinions of the minority or merely skip certain procedures as nobody could attest their power. These wrong or ineffective decisions can create losses to stakeholders involved. There is a call to balance the power through the implementation of corporate governance practices in order to maintain fairness and justice to all stakeholders. In the current economic and political contexts, there is a need to accommodate needs of all stakeholders. Higher education institutions are of no excuse. Universities should adopt corporate governance principles and practices in the same manner as a business organization. The aim of this conceptual paper is to identify leading principles and practices adopted by the international community and suggest corporate governance principles and practices for higher education institutions.

Keywords: Corporate governance, financial disclosure, nonfinancial disclosure

INTRODUCTION

"Unlimited power is apt to corrupt the minds of those who possess it; and this I now, my lords, that where laws end, tyranny begins", William Pitt (British Prime Minister 1783-1801, 1804-06).

Many nonprofit organizations have adapted business practices due to the pressure from macroeconomic environments. They have to compete with other organizations and improve their efficiency in serving customers or beneficiaries despite limited resources which must be used wisely. Efficiency and cost saving become important issues among organizations, including educational institutions. The Office of the Higher Education Commission (2008) reported that, as of 2008, there were 78 public universities. Of these, 13 were granted autonomous status, received partial funding from the government but were excused from the government bureaucratic system (Thongroj, 2008). These universities have autonomy in their operation but must be transparent and open to investigations. It is a policy of the Thai government to turn more public universities toward such autonomous status because they realize the inefficiency of universities under the bureaucratic system. Furthermore, although public universities were funded by the government, the amount could hardly cover all expenditures given increasing numbers of students and new faculty members. Resources available to universities are scarce and must be used appropriately. At present, public universities have to compete not only among themselves but also with 69 private universities. However, for both public and private universities, there is an attempt to retain the number of students that might lead some administrators to lower down their educational standards. While this decision provides students better chances to graduate, it might negatively affect the education quality. The

lower quality of education is likely to disadvantage other stakeholders such as organizations that hire graduates and the society as a whole. Hence, it is imperative that higher education institution should create a governance and transparency system that provides checks and balances in order to serve all stakeholders appropriately.

Thailand's Higher Education System

Thailand's National Education Act 2542 suggested that the Office of the Higher Education Commission (OHEC) devise education policies in conformity with the national education policy. The OHEC, therefore, is the policy maker for both public and private universities under its governance. Each higher education institution appoints a University Council or Board of Trustees as its governing body. This council would appoint university's president to take care of the operation of the university (Thongroj, 2008).

In the past, Thailand's education system focused on acquiring knowledge and information from the West and passed them on to students. Moreover, the higher education system aimed basically at producing personnel to serve the government for country development. Knowledge was then imported as it was and was not modified to fit the Thai context. Nowadays, the OHEC has a policy to promote research projects among universities in order to build local knowledge and modify western knowledge to fit into Thailand's context (Kru Joe, 2008).

The government established OHEC to manage the higher education system under the governance of the Ministry of Education. In an attempt to create checks and balances in the education system, the government has established several independent organizations to investigate the system. In order to open up extensive opportunities for students throughout the country, the Central University Admission System was introduced. Starting from the student recruitment process, The National Institute of Educational Testing Service (Public Organization) developed an Admissions System and devised a formula that take into consideration 3-year average high school's GPA or GPAX, Ordinary National Education Test (O-net), General Aptitude Test (GAT) and Professional Aptitude Test (PAT) (Tewfree, 2010). In addition, institutions also have their own direct admission system. The Office for National Education Standards and Quality Assessment (Public Organization) or ONESQA was established in order to maintain higher education institutions' standards and quality.

Chiangkool (2008) reported that the problems regarding academic quality among higher education institutions have still not been solved. Education has not yet been distributed equally throughout the country (Office of the Education Council, 2008). The overall quality of teachers, curriculum, and teaching process still need to be developed. The national budget was assigned less to The Ministry of Education than in earlier years. In other words, budgets were allotted more for other objectives than education (Chiangkool, 2008). In fact, the government emphasized more on the advancement of the business sector and as a result, high quality personnel left the academe to join the business sector for higher compensation and career advancement. Chiangkool further described that higher education institutions expanded too rapidly especially in sociology and humanity fields, resulting in problems regarding the quality of education. He mentioned the following important problems:

1. Public and private sectors did not have chance to participate in the determination and planning of nationwide education system. Plans were made among an elite group of Ministry's administrators and imposed laws downwardly. Hence, the personnel in the operation level do not or cannot follow the Ministry's orders.
2. The elite group did not realize the root of the problems against the transformation of education system.
3. Evaluation and remuneration systems were under the centralized governmental bureaucratic system.

Nakornthup (2001) reported that universities claimed they lack autonomy. Thai higher education system was centralized under the bureaucratic governance system (Tanchaisak, 2010). Tanatrakul (1992) called for transparency and clarification of the roles of University Council, the appointment of and roles of president, roles of faculty chairpersons, and the professionalism of university administrators.

Many problems are facing the Thailand education system. Stakeholders such as the society, business organizations, and others. are calling for the educational reform. Although the National Education Act allows stakeholders to participate in education management, in practice, the policies are still controlled by the elite of higher ranking authorities in the Ministry. The decentralization per se is the decentralization of university's operations but still under strict regulations imposed from the OHEC and ONESQA and budget is the tool to control universities' operations. Universities do not have a chance to render any effect on policy making procedures. In this case, corporate governance or transparency in higher education system is likely to assist in balancing and opening up a ground for universities to contribute to and participate in the educational reform of the country. Moreover, corporate governance could prevent a university from the risk of losing hold of quality standard. The transformation of public universities to become autonomous might provide flexibility and efficiency in operations, but there is a need for good corporate governance within universities as well.

Corporate Governance

Corporate governance has been receiving greater attention since 2001 in modern organizations as a result of the disputes and frauds in many large organizations. Powerful management or employees who maintain strong authority on certain parts of an operation could sometimes make decision without reasonable basis. A dominating party in organizations, though with good intentions, may make wrong or ineffective decisions because they do not adhere to opinions of the minority or simply avoid certain procedures due to their abusive usage of power. These wrong or ineffective decisions can create losses to stakeholders involved. There is a call to balance the power through the implementation of corporate governance practices in order to maintain fairness and justice to all stakeholders.

The fall of Enron, WorldCom, and many other organizations severely shocked the world. Many shareholders, employees, and other stakeholders were all negatively affected. From then on, there were calls for organizations to set up checks and balances in order to restrain management from using their power freely. "...the essence of governance is found in the relationship between various participants in determining the direction and performance of organizations (Bain & Band, 1996, p. 2). Participants who are involved in organizational decisions involve shareholders, the board of directors, management, employees, suppliers, creditors, the community and others. In other words, organizations should take various stakeholders' interests into consideration regarding their operations. Certain procedures are needed to ensure that organizations tend to stakeholders' interests in their operations.

Corporate Governance is involved with the goal to achieve better corporate transparency and accountability. The United Nations Conference on Trade and Development (UNCTAD), an organization under the governance of United Nations, published The Guidance on Good Practices in Corporate Governance Disclosure (2006) which provided guidance for developing countries and transition economies on the disclosure of operations. The major purpose was to address major concerns of stakeholders, particularly investors. The Guidance compiled recommendations to disclose certain aspects of organizations based on principles drawn from various sources such as the Organization for Economic Co-operation and Development (OECD) Principles, the International Corporate Governance Network (ICGN), among others. Organizations are recommended to perform financial and nonfinancial disclosures in their annual general meeting to all shareholders.

The financial disclosures include the board's responsibilities to disclose financial communications, the enterprises' disclosure of significant transactions with related parties. The nonfinancial disclosures include:

1. The disclosure of organization's objectives;
2. Ownership and shareholder rights;
3. Changes in control and transactions involving significant assets;
4. Governance structures and policies, the board's role and functions, board committees, ethics policy and support structure;
5. Members of the board and key executives which include duties and qualifications, evaluation mechanism, directors' remuneration, succession planning, and conflict of interest;
6. Material Issues regarding stakeholders and environmental and social stewardship;
7. Material Foreseeable Risk Factors;
8. Independence of External Auditors; and
9. Internal Audit Function.

These guidelines should be adjusted or follow a "comply or explain" rule, that is, follow the local code's recommendations and explain any deviations.

Corporate Governance in Thailand

The Thai government established the National CG Committee to develop and promote corporate governance in Thailand. The corporate governance principles aim to assist organizations in creating the relationship between board of directors, management team, shareholders, and stakeholders; develop the structure and internal process to evaluate the performance of management team transparency and effectiveness; promote leadership and corporate control to establish the transparent working environment; and enhance company's competitiveness while taking business ethics and interest of other stakeholders into consideration. Best practices were drawn from Thailand's Stock Exchange (National CG Committee, 2001).

The leading institution that promotes corporate governance in Thailand is the Stock Exchange of Thailand (SET). It is apparent that having transparency among organizations, especially those listed in the stock exchange would increase confidence among investors resulting in the prosperity of the stock market in Thailand. SET began in 1995 with the study of audit committee roles in investigating accounting transactions of companies. In 1998, SET issued a guideline – "Code of Best Practices for Directors of Listed Companies". In the year 2000, a framework for developing good corporate governance systems and practices was drawn. In 2002, 15 principles of good corporate governance for listed companies were proposed based on the corporate governance best practices from the OECD and World Bank. All listed companies are required to follow these principles. These 15 principles were revised and updated in 2006 to reflect the recommendations made by World Bank in its report related to Thailand corporate governance (Corporate Governance Center, 2006).

These principles became the nations' main Corporate Governance principles not only among the listed companies but also among other companies. All public organizations use these principles to create their corporate governance system (SET, 2007). The principles composed of the following categories (Corporate Governance Center, 2006):

1. Rights of shareholders;
2. Equitable treatment of shareholders;
3. Role of stakeholders;
4. Disclosure and transparency; and
5. Responsibilities of the board.

In Australia, the Australian's National Governance Protocols (2003) imposed obligations on Australian universities to: (a) define institutional objectives; (b) define governing body purposes and duties; (c) define systematic professional development programs and performance evaluations of governing bodies; (d) define systematic procedures for composition of the governing body, including limits on size of the governing body and specifications of expertise; (e) include independent members in the governing body; and (f) codify and report business practices and risk analysis.

Suggested Model for Corporate Governance in Higher Education Institution

Based on the principles provided under the principles of good corporate governance for listed companies in Thailand and good practices for higher education institutions in Australia, the corporate governance principles are illustrated in a model shown in Figure 1.

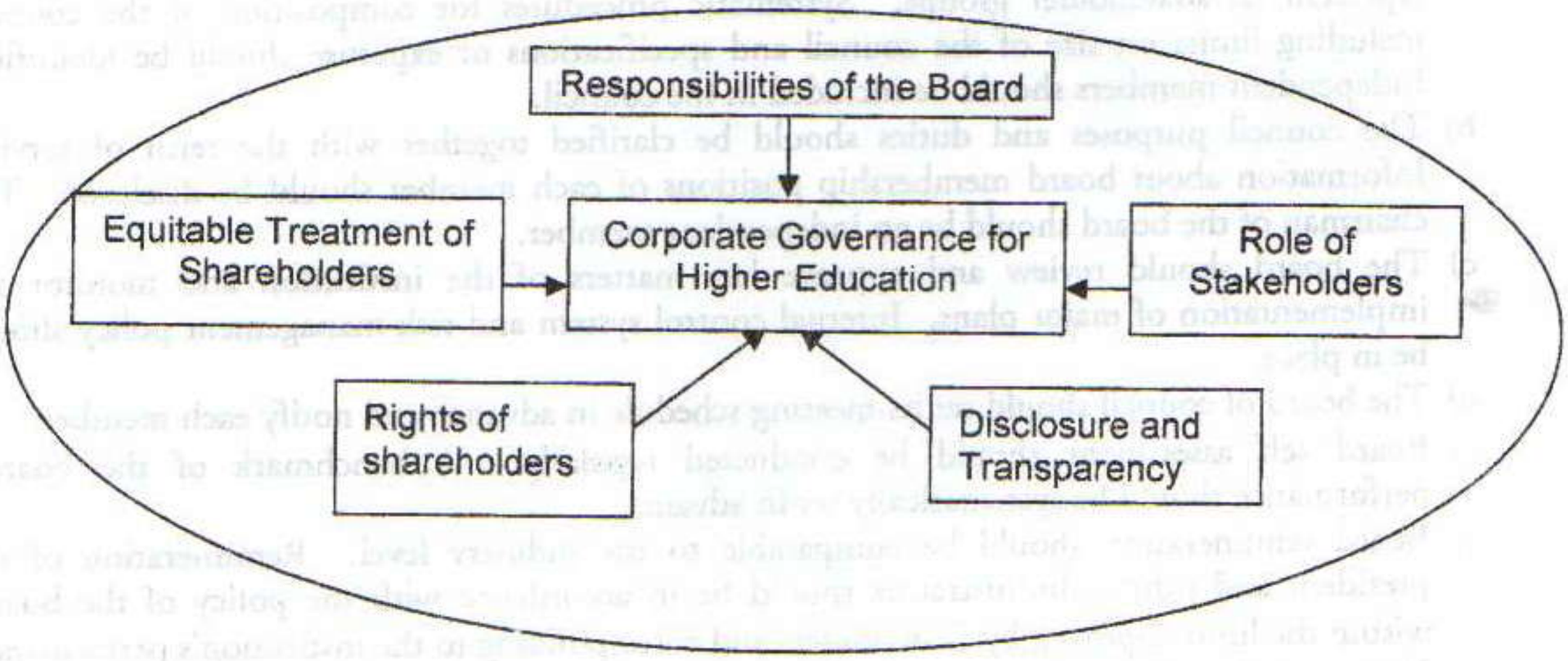


Figure 1. Corporate governance principles for higher education institutions

The practices following the five principles suggested for higher education institutions in Thailand were proposed as follows:

1. Rights of Shareholders
   a) Shareholders should have the rights in appointing the board of council and are eligible to make decisions on significant institutional changes.
   b) Institutions should encourage and facilitate shareholders to exercise their rights beyond what is required legally.
   c) Information should be provided sufficiently and timely through proper channels.
   d) Agenda received from minority shareholders should be entered into the board's meeting. There should be processes for minority shareholders to suggest qualified persons as members of the council.
2. Equitable Treatment of Shareholders
   a) All shareholders should be treated equally.
   b) Institutions should provide opportunities for minority shareholders to express their opinions.
   c) Board member election should be performed through a process that all shareholders are able to vote on individual nominees.
3. Role of Stakeholders
   a) Stakeholders of an institution should be identified and treated fairly in accordance with their legal rights.

b) A mechanism should be created to promote cooperation between the university and its stakeholders.
c) A clear procedure regarding a two-way communication between stakeholders and the board of council should be established.

4. Disclosure and Transparency
   a) All important matters relevant to the university, both financial and nonfinancial, should be disclosed accurately and on a timely basis through easy-to-access channels that are fair and trustworthy.
   b) Objectives of the institution must be clearly delineated.

5. Responsibilities of the Board

The board of council is accountable to shareholders and independent of management.

a) Board structure, number of members and composition should be clearly specified and represent all shareholder groups. Systematic procedures for composition of the council, including limits on size of the council and specifications of expertise should be identified. Independent members should be included in the council.
b) The council purposes and duties should be clarified together with the term of service. Information about board membership positions of each member should be disclosed. The chairman of the board should be an independent member.
c) The board should review and approve key matters of the institution and monitor the implementation of major plans. Internal control system and risk management policy should be in place.
d) The board of council should set its meeting schedule in advance and notify each member.
e) Board self assessment should be conducted regularly. A benchmark of the board's performance should be systematically set in advance.
f) Board remuneration should be comparable to the industry level. Remuneration of the president and other administrators should be in accordance with the policy of the board, within the limit approved by shareholders and corresponding to the institution's performance. Non-executive council members should appraise the performance of the executives annually to set his/her compensation. The criteria should be objective.
g) The board should encourage and facilitate training and development for all internal parties.

A university has many stakeholders and each has distinct needs, wants and level of power be it students, parents, teachers, staff, text suppliers, food shops, community, business community, and the society. The needs and wants of stakeholders are sometimes in conflict with each other. For example, some students might want easy grades while teachers might be tough on grades to satisfy the criteria levied by OHEC; administrator might have concerns about numbers of students and lower the admission criteria and so on.

Corporate governance enables a transparent governance and operating system that create fairness and equitable due processes to all parties involved. It provides a structure that harmonizes needs and requirements of stakeholders. The consideration of stakeholders' opinions and concerns contributes to innovative ideas, shared vision, and teamwork in universities.

CONCLUSION

Conflicts of interests exist among stakeholders. Unfortunately, the Asian business mental model aims toward achieving and retaining control (Wallace & Zinkin, 2005). This mental model results in the maintenance of power and risk of creating damages to some parties. Usually, managers and administrators seek ways to keep things run as is and they want to keep the status quo. Voices or diversions from the less powerful people are suppressed. Good corporate governance calls for attentions to the interests of

minority shareholders, employees, faculty, students, parents, and other groups. Problems might arise when managers do not act in the best interests of shareholders. The Principles of Corporate Governance helps reduce risks that might incur from deviancy from good practices. Appropriate checks and balances should be incorporated into the process of performance (Low, 2002).

The above framework is compiled from various sources and included important practices adopted by organizations. Balances and checks are two important elements in good corporate governance practices. Higher education institutions should embrace these principles in order to create a good corporate governance policy.

REFERENCES

Bain N. & Band, D. (1996). *Winning ways through corporate governance.* London: Macmillan Business.

Chiangkool, V. (2008). *Thailand's education system 2006/2007: Problem solving and holistic educational reform.* Bangkok: Office of the Education Council.

Corporate Governance Center (2006). *The principles of good corporate governance for listed companies 2006.* The Stock Exchange of Thailand.

Kru Joe. (2008). *History of Thai education system.* Retrieved July 13, 2010, from http://www.kroobannok.com/3345

Low, C. K. (2002). *Corporate governance: An Asia-Pacific critique.* Hong Kong: Thomson.

Nakornthap, A. (2001). *Opinions for higher education development in the decade.* Retrieved July 10, 2010, from http://www.onec.go.th/publication/thai/lesson09.pdf

National CG Committee. (2001). *Definitions of corporate governance.* Retrieved July 13, 2010, from http://www.cgthailand.org/SetCG/about/about_en.html

National Governance Protocols. (2003). *Backing Australia's future.* Retrieved July 13, 2010, from http://www.universitygovernance.edu.au/Resources/Protocols.htm

Office of the Education Council (2008). *Framework for education development during the Tenth National Economic and Society Development Plan (2550-2554 AD) that Conform to The National Education Plan (2545AD-2559AD).* Retrieved July 13, 2010, from http://www.onec.go.th/publication/51039/full51039.pdf

Office of the Higher Education Commission (2008). *Universities under OHEC.* Retrieved July 10, 2010, from http://www.mua.go.th/data_main/university_1.xls

Stock Exchange of Thailand (SET). (2007). *Compliance with good corporate governance principles.* Retrieved July 13, 2010, from http://www.set.or.th/en/about/overview/files/supervision/SET_CG2007_en.pdf

Tanatrakul, T. (1992). *University: The needs for professional administrators.* Bangkok: Office of the higher education commission.

Tanchaisak, K. (2010). The management of human resources among community colleges in Thailand. A paper presented at the *International Journal of Arts and Sciences Conference* 29 May 2010 – 4 June 2010 at Harvard University, Boston, USA.

Tewfree. (2010). *What is admission?* Retrieved July 13, 2010, from http://www.tewfree.com

Thongroj, P. (n.d.). *University council and higher education development.* Retrieved July 13, 2010, from http://www.dusit.ac.th/course/standard/No-3.pdf

Thongroj, P. (2008). *Misconception about autonomous university.* Retrieved July 13, 2010, from http://news.sanook.com/education/education_231744.php

United Nations Conference on Trade and Development (UNCTAD). (2008). *Guidance on good practices in corporate governance disclosure.* New York: United Nations.

Wallace, P. & Zinkin, J. (2005). *Mastering business in Asia: Corporate governance.* Singapore: John Wiley & Son (Asia).

THE EFFECTIVENESS OF TRANSFORMATIVE LEARNING FRAMEWORK ON FRESHMAN STUDENTS' THINKING SKILL

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ABSTRACT

The De La Salle University started developing a new General Education Curriculum (GEC) in School Year (SY) 2003-2004. The key part of this revised GEC, labeled as Lasallian Pedagogical Framework of Transformative Learning, is the development of students' critical thinking (CT) and problem solving (PT) skills. A study to assess the changes in students' thinking skills as a result of exposure to the new framework was conducted in SY 2007-2008. A total of 2, 912 out of 3, 158 freshmen were administered the DLSU Thinking Skills Test during their first week of enrollment at the University (pretest) and after one year (posttest).

Results indicate that freshman students' critical thinking skill remained the same (i.e., "high average") after one year. Their raw scores on the subtest and overall, however, revealed significant increase. This is true for all colleges, except for College of Education. For problem-solving skill, marked improvements were also observed in the post-test results. While Computer Studies and Education students' level remained the same after one year (i.e., high average), the four other colleges have shown progress.

Their profiles on the different domains of critical thinking skills revealed that the six colleges performed best in "Identifying the Assumptions". The next highest scores were in "Drawing a Conclusion", then in "Summarizing a Conclusion", and then in "Detecting Reasoning Error". They performed the least in "Matching Arguments". Among the three Problem Solving domains, all six colleges performed best in "Relevant Selection" during the pretest and posttest. All colleges but one got the next highest score in "Identifying Similarities" and then in "Finding Procedures" during the two periods.

Keywords: Curriculum, pedagogical framework, transformative learning, thinking skills

BACKGROUND OF THE STUDY

In School Year 2003 -2004, De La Salle University (DLSU) in Manila started formulating a new general education curriculum geared towards the development of various modes of inquiry among the students as well as critical thinking and problem-solving skills and those related to lifelong learning. The new framework, known as the Lasallian Pedagogical Framework of Transformative Learning, aims to develop within the students learning skills that would enable them to generate knowledge from various sources of information and in different circumstances. This new teaching-learning framework requires teachers to adopt a transformative paradigm of instruction that would involve engaging students in a deeper mode of learning and inquiry. It includes the following learning areas: students' learning process, teacher's work,

students' learning environment, and assessment of student learning (DLSU GEC Committee, 2004; DLSU Newsletter, 2005; ITEO, 2006).

During the Second Term of SY 2007-2008, the need to establish the effectiveness of the TL program, in so far as the students' learning and development, was recognized. Since one of the main goals of the TL program is to develop students' thinking and inquiry skills, it was decided that the assessment of the changes in students' thinking skills, as a result of exposure to the TL set-up, be conducted. The DLSU Thinking Skills Test (DLSU-TST), which measures the critical thinking and problem solving skills of students, was developed and validated. The test consists of the six sub-areas for critical thinking (i.e., summarizing and drawing conclusions, identifying assumptions, assessing the impact of additional evidence, detecting reasoning errors, matching arguments, and applying principles) and three for problem solving (i.e., relevant selection, finding procedures, and identifying similarities).

EVALUATION FRAMEWORK

This study is part of the overall initiatives of the University in conducting an evaluation of the teaching learning in the Lasallian Pedagogical Framework of Transformative Learning. The evaluation of the program, which started as early as School Year 2003-2004, was guided by Huitt's (2003) Transactional Model of Teaching-Learning Process, which looks into four categories: (a) context, (b) input, (c) classroom processes, and (d) output. According to Huitt, the output is the most important of these categories because the variables in the rest of the categories are used to predict or relate to the variables measured in this output. The classroom processes category includes all the variables that occur in the classroom, such as teachers' and students' behaviors. Input refers to the description of teachers and students prior to their coming into the classroom. Context includes all of those variables outside of the classroom that have an impact on teacher and student characteristics, classroom processes, and output.

Figure 1 presents the framework for the evaluation of the TL program. For this particular paper, only the outputs of the TL program will be presented, as measured by the development of students' thinking skills, specifically critical thinking (CT) and problem solving skills (PS) after one year of exposure to the new teaching framework.

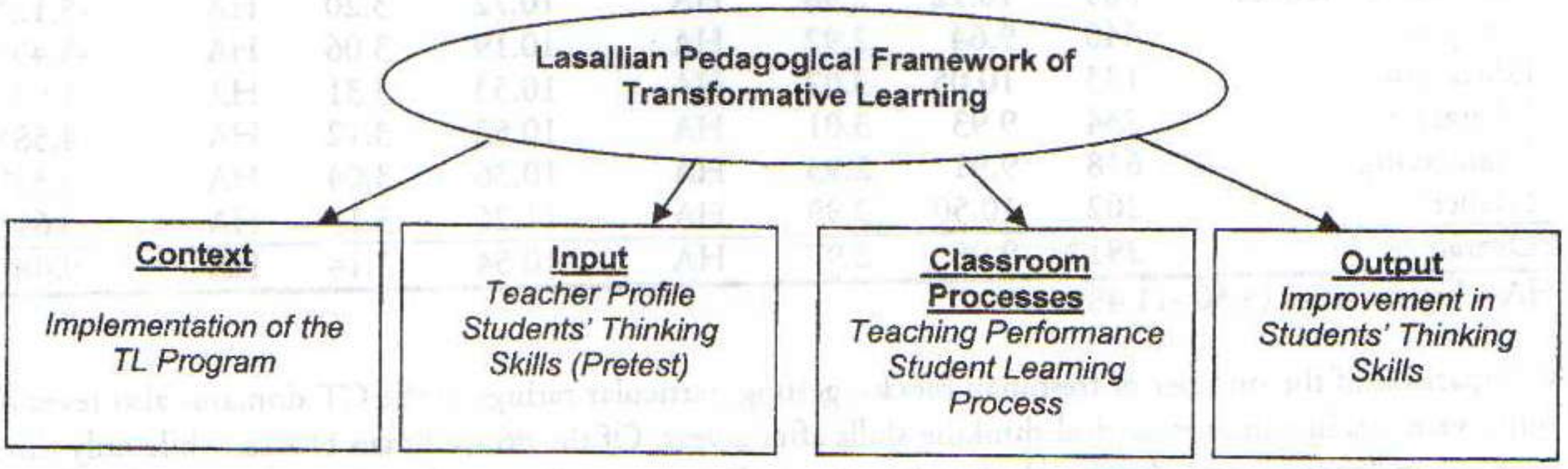


Figure 1. Evaluation framework for the TL program

Objectives of the Study

This paper is part of the longitudinal study currently conducted by DLSU on the development of students' thinking skills as a result of their exposure to TL framework. Specifically, this paper seeks to compare the students' critical thinking and problem-solving skills after one year by: (a) college affiliation, (b) freshman block, and (c) CT and PS sub-area.

METHODOLOGY

The freshmen of SY 2008-2009 comprised the first batch of students for the longitudinal study. A total of 2, 912 freshmen has administered the DLSU Thinking Skills Test (DLSU-TST) during the first few weeks of classes (i.e., pretest data) and again after a year (i.e., posttest data). The DLSU-TST is a standardized test developed by the University that measures students' critical thinking and problem-solving skills. Data analyses included mean, standard deviation, and *t*-test. The percentage scores of students (i.e., number of correct answers divided by total number of items) was also computed to determine the students' performance on the different domains of the CT and PS subtests.

SALIENT FINDINGS

Changes in Freshman Students' Critical Thinking Skills

Test profiles based on the DLSU Thinking Skills in Table 1 indicate that freshman blocks of the six colleges have "high average" critical thinking (CT) skills at the time they entered the University. When the same test was administered to the same cohorts after one year, the same CT profile was obtained. Freshmen still registered high average critical thinking skills. Their mean raw scores on the subtest and overall, however, revealed significant increase. This is true for all colleges, except for College of Education.

Table 1. *Freshman Students' Pretest and Posttest Results on Critical Thinking Skills Subtest*

College	N	Pretest			Posttest			*t*-value
		Mean	SD	Rating	Mean	SD	Rating	
Business/Economics	785	10.12	2.98	HA	10.72	3.20	HA	-5.12*
Computer	440	9.64	2.92	HA	10.19	3.06	HA	-3.49*
Education	133	10.05	3.02	HA	10.53	3.31	HA	-1.53
Liberal Arts	734	9.93	3.01	HA	10.52	3.12	HA	-4.58*
Engineering	618	9.91	2.93	HA	10.36	3.04	HA	-3.33*
Science	202	10.50	2.99	HA	11.26	3.13	HA	-3.61*
Overall	2912	9.98	2.97	HA	10.54	3.14	HA	-9.08*

HA = high average (9.50 -11.49)

Comparison of the number of freshman blocks, getting particular ratings in the CT domains also revealed improvements in students' critical thinking skills after a year. Of the 86 freshman blocks, while only three received an "above average" rating during the pretest, there were 9 blocks who obtained that rating during the posttest. Majority of the blocks across colleges also revealed positive trend: from average to high average or above average, and from high average to above average (Table 2).

Table 2. *Freshman Blocks' Critical Thinking (CT) Test Profiles*

Rating	Business (N-22)		Computer (N=11)		Education (N=7)		Arts (N=21)		Eng'g (N=18)		Science (N=7)		Total (N=86)	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
High												1	0	1
Above Average	1	4					1	1	1	1	3	3	9	
High Average	16	16	8	10	7	7	14	19	12	15	5	3	62	70
Average	5	2	2	1			5		5	2	1		18	5
Low Average			1				1	1					2	1
Below Average							1						1	0
Total	22	22	11	11	7	7	21	21	18	18	7	7	86	86

When their profile on the different CT domains was investigated, results indicated that students from six colleges performed the best in "Identifying Assumptions". Except for the Education students, the next highest scores were obtained in domain "Drawing Conclusion", then in "Summarizing a Conclusion", and finally in "Detecting Reasoning Errors". They performed the least in "Matching Arguments". This indicates that freshmen are at their best in tasks that require them to identify the main point of the argument, look for the reasoning to support the conclusion, and identify the important point not actually stated in the reasoning. On the other hand, freshmen seem to lack the skills to identify the statement or option that most closely parallel the reasoning used in a given argument.

There was a slight improvement in the performance of all colleges on each domain, as indicated by the increase in their percentage scores during the posttest. However, the ranking of domains remained the same after one year, with "Identifying Assumptions" still on top and "Matching Arguments" at the bottom (Table 3).

Table 3. *Freshman Students' Pretest and Posttest Results on Different CT Domains*

CT Domain	Business		Computer		Education		Eng'g		Arts		Science	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Summarizing conclusion	41.4 (3)	42.4 (3)	38.6 (3)	41.0 (3)	41.7 (3)	44.8 (2)	41.3 (3)	41.0 (3)	41.7 (3)	43.2 (3)	43.3 (3)	47.3 (3)
Drawing a conclusion	45.0 (2)	46.8 (2)	43.0 (2)	47.7 (2)	44.4 (2)	44.2 (3)	44.1 (2)	47.2 (2)	42.4 (2)	45.3 (2)	45.8 (2)	49.3 (2)
Identifying assumption	57.3 (1)	61.4 (1)	53.1 (1)	52.6 (1)	57.4 (1)	55.1 (1)	53.3 (1)	55.9 (1)	54.2 (1)	58.4 (1)	60.4 (1)	63.3 (1)
Assessing Impact of Evidence	27.2 (5)	30.0 (5)	25.4 (6)	27.8 (5)	25.0 (6)	28.9 (5)	27.7 (5)	27.7 (5)	25.7 (5)	26.4 (5)	28.2 (5)	27.4 (5)

Detecting reasoning errors	36.2 (4)	35.7 (4)	33.9 (4)	35.5 (4)	34.6 (4)	34.1 (4)	34.2 (4)	38.1 (4)	35.2 (4)	38.2 (4)	38.1 (4)	41.5 (4)
Matching arguments	22.5 (6)	27.8 (6)	22.1 (6)	25.6 (6)	24.1 (5)	27.5 (6)	21.9 (6)	23.8 (6)	23.1 (6)	24.7 (6)	21.5 (6)	25.5 (6)
Overall	40.8	42.8	38.8	48.7	40.5	41.7	39.74	41.30	39.67	41.95	42.35	45.44

(x) – rank

Changes in Freshman Students' Problem-Solving Skills

Majority of the freshman blocks across colleges registered high average in terms of problem solving (PS) skills. By college, Engineering students topped in this skill, having registered above average rating while the Arts students lagged behind, having obtained "average" rating. This is expected since Engineering students, in contrast with those in the liberal arts courses, are expected to be more analytical and likely to use numerical and spatial skills in their thinking and reasoning.

Marked improvements were observed in the PS posttest profile of freshmen across colleges. While Computer and Education students' level remained the same after one year of exposure to TL set-up (i.e., high average), their counterparts in four other colleges have shown progress - from average to high average for Liberal Arts students, high average to above average for Business and Science students, and from above average to high average for Engineering students (Table 4).

Table 4. *Freshman Students' Pretest and Posttest Results on Problem Solving Subtest*

College	N	Pretest			Posttest			*t*-value
		Mean	SD	Interp	Mean	SD	Interp	
Business/Economics	785	12.83	3.98	HA	14.51	3.90	AA	-11.98*
Computer	440	12.56	3.80	HA	13.40	4.12	HA	-4.85*
Education	133	11.71	3.60	HA	12.62	4.24	HA	-3.32*
Liberal Arts	734	10.78	3.53	A	12.07	3.65	HA	-9.30*
Engineering	618	13.60	3.60	AA	15.54	4.00	H	-12.93*
Science	202	13.44	4.16	HA	15.33	4.19	AA	-7.55*
Total	2912	12.43	3.90	HA	13.92	4.15	AA	-21.38*

A = average (10.50–11.49) HA = high average (11.50–13.49) AA = above average (13.50–15.49)

Individual freshman blocks also showed improvements in their performance on the PS subtest after one year. Of the 86 blocks, while only one block obtained high rating during the pretest, there were 19 blocks who got high rating during the posttest. There were also more blocks that registered above average rating during the posttest and less that obtained low average and below average ratings (Table 5).

Table 5. *Freshman Blocks' Problem Solving (PS) Test Profiles*

Rating	Business (N-22)		Computer (N=11)		Education (N=7)		Arts (N=21)		Eng'g (N=18)		Science (N=7)		Total (N=86)	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
High		5							1	10		4	1	19
Above Average	9	11	2	6	1	2			9	7	4	3	25	29

High Average	9	6	6	4	2	3	7	17	6	1	2		32	31
Average	3		2	1	3	1	7	3	2		1		17	5
Low Average	1		1		1	1	6	1					9	2
Below Average														
Low							1						1	0
Total	22	22	11	11	7	7	21	21	18	18	7	7	86	86

Among the three domains of the PS subtest, freshmen from all six colleges performed best in Relevant Selection during the pretest and posttest, as shown in their percentage scores. This PS skill entails selecting only that information among many others that is necessary and helpful in finding a solution. The next highest score was obtained in domain Identifying Similarities by students in all colleges, except Engineering students who performed better in domain Finding Procedures. Identifying Similarities involves tasks that require a student to choose another situation or method that has a similar structure. On the other hand, Finding Procedures requires a student to find a method or procedure which can be used to generate a solution.

Table 6. *Freshman Students' Pretest and Posttest Results on Different PS Domains*

PS	Business		Computer		Education		Eng'g		Arts		Science	
Domain	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Relevant Selection	61.44 (1)	65.24 (1)	58.77 (1)	60.90 (1)	54.86 (1)	57.63 (1)	62.99 (1)	70.06 (1)	52.12 (1)	56.62 (1)	63.00 (1)	69.37 (1)
Findings Procedures	44.07 (3)	54.04 (2)	41.48 (3)	47.67 (2)	37.48 (3)	46.02 (2)	47.78 (2)	58.24 (2)	32.66 (3)	40.00 (3)	45.81 (3)	57.57 (2)
Identifying Similarities	44.36 (2)	46.88 (3)	42.89 (2)	44.98 (3)	40.40 (2)	37.74 (3)	44.95 (3)	49.62 (3)	37.86 (2)	40.95 (2)	47.93 (2)	50.33 (3)
Overall	52.00	57.98	50.06	53.48	46.41	49.94	54.42	62.19	43.06	48.17	54.48	61.75

CONCLUSION AND RECOMMENDATIONS

Results of the studies indicate a general positive direction in so far as the implementation of the transformative learning program is concerned. The initial impact of the TL program on the students' critical thinking and problem solving has been demonstrated in the significant increase in the students' scores in the thinking skills test after one year of enrollment in the University. While their level of critical thinking skills remained the same (i.e., high average), their scores on the subtest revealed significantly higher scores during the third term. For the problem solving subtest, significant changes in the level were observed in the six colleges, from average to high average, and from high average to above average or to high.

The results of the study are encouraging since they show how the transformative learning has contributed in the development of students' thinking skills. Past studies have shown that critical thinking skills appear among students to be stable over a period of years but yet there is a space for significant growth (Facione, Facione & Giancarlo, 1997). This is especially true for students who are exposed to a teaching-learning environment that seeks to enhance students' critical thinking skills and motivation. A study by Rimiene (2002) indicated significant improvements on the scores of students who were exposed to cooperative and active learning in all subscales of critical thinking skills and in the overall California Critical Thinking Skills Test (CCTST). Students who attended the University's critical thinking programme obtained higher scores in analysis, evaluation, inference, deductive and inductive during the post-test. Similarly, nursing students in the People's Republic of China who were exposed to problem-based learning had a greater improvement on the same test during the posttest, specifically on the analysis and induction subscales and overall scores as compared to lecture students (Yuan, et al, 2008). Furthermore, non-science majors at a small two-year college who were taught using case study method experienced positive changes in general critical thinking skills based on Watson-Glaser Critical Thinking Appraisal and showed cumulative improvement in their ability to identify claims and evidence, as measured by Claim and Evidence Assessment Tool (Terry, 2008).

The freshman students were found to have performed very well in problem solving subtest both during the pretest and the posttest as majority of the freshman blocks across colleges registered "high average" in this domain. Significant improvements in their profiles were also observed after one year in the University. The results also corroborated those found in previous studies on the effects of various teaching-learning environments on students' problem solving skills. For example, mind mapping with cooperative learning (MMCL) and cooperative learning (CL) were found to have significant positive overall effects on the programming performance, problem solving skill, and metacognitive knowledge among computer science students in Malaysia. Students taught via the MMCL method significantly outperformed the students taught via the traditional method in programming performance and metacognitive knowledge. Meanwhile, students taught via the CL method significantly outperformed the students taught via the traditional method in metacognitive knowledge (Ismail, Ngah, & Umar, 2010).

In spite of the encouraging feedback about the initial effects of the TL program on students, the University still faces a lot of jobs/tasks to accomplish and obstacles/drawbacks to overcome to achieve the objectives of the Lasallian core curriculum. For the part of faculty members, continuous seminar workshops on the TL framework need to be offered to and attended by the faculty members, particularly the new and part-time teachers. Furthermore, the teachers should support the new teaching framework since believing in and embracing the program goals and objectives is one of the most basic ingredients in the success of a program.

Similarly, the students should be given orientation on the principles, strategies, and relevance of the TL framework to enable them to appreciate the teaching and learning processes inside the classroom. The task of orienting the students about the TL paradigm should not totally be left to individual TL teachers during their classes, but the initiatives should be institutionalized and spearheaded by the University.

The evaluation of the TL program should continuously be conducted to gather feedback that would be important for program implementation and improvement. It is important that the strengths and weaknesses of the TL program be identified, and that new programs and strategies be introduced to address the program goals and objectives that were not addressed.

REFERENCES

Committee on Lasallian Pedagogical Framework. (2004). *Towards a Lasallian pedagogical framework of transformative learning.* Unpublished manuscript, De La Salle University, Manila.

De La Salle University (DLSU). (2004). *General Education Curriculum.* Unpublished manuscript, De La Salle University, Manila.

DLSU Newsletter. (2005, February 21). *New Lasallian teaching framework approved.* Vol 36, No. 38. Retrieved June 29, 2010, from http://www.dlsu.edu.ph/offices/mco/publications/newsletter/volume36/no38/

Facione, P. A., Facione, N. C., & Giancarlo, C. A. (1997). *Setting expectations for student learning.* New Directions for Higher Education. Millbrae: California Academic Press.

Huitt, W. (2003). *A transactional model of the teaching/learning process. Educational Psychology Interactive.* Valdosta, GA: Valdosta State University. Retrieved July 3, 2008, from http://chiron.valdosta.edu/whuitt/materials/tchlrnmd.htmlIsmail.

M. N. Ngah, M. A. & Umar, I.N. (2010). The effects of mind mapping with cooperative learning on programming performance, problem solving skill and metacognitive knowledge among computer science students. *Journal of Educational Computing Research, 42*(1), 35-61.

Institutional Testing and Evaluation Office (ITEO. (2006). *Development and validation of faculty evaluation forms for faculty members using transformative learning classes.* Unpublished manuscript, De La Salle University, Manila.

Rimiene, V. (2002). Assessing and developing students' critical thinking. *Psychology Learning and Teaching, 2*(1), 17-22.

Terry, D. R. (2008). *Using the case study teaching method to promote college students' critical thinking skills.* Dissertation Abstracts International Section A: Humanities and Social Science, 68(9-A). 0419-4209.

Yuan, H., Kunaviktikul, W., Klunklin, A., & Williams, B. A. (2008). Improvement of nursing students' critical thinking skills through problem-based learning in the People's Republic of China: A quasi-experimental study. *Nursing & Health Sciences, 10*(1), 70-76.

THE PERCEIVED IMPORTANCE OF INTEGRATED MARKETING COMMUNICATION CHANNEL ON DECISION TO A GRADUATE INSTITUTION

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ABSTRACT

In the past, communications were performed nearly independently among departments and occasionally resulted in communication breakdown while synergy could hardly occur. Modern managers agree that Integrated Marketing Communication (IMC) is an essential marketing tool in today's businesses. It is important to communicate the offered benefits of an organization to consumers. IMC activities include advertising, public relations, sales promotions, sponsorships, and direct response marketing. These activities are performed through three basic elements or groups of channel namely; traditional media, e-active marketing channels, and alternative marketing tools such as branded entertainment and lifestyle marketing. In the globalization context, universities and colleges are utilizing all of these tools in order to market their institutions and reach applicants because of their efficiency and effectiveness. This paper aimed to investigate the perceptions of prospective graduate level students towards IMC channels upon their decision to choose or apply to an institution. Six graduate program deans and directors in four universities were interviewed to shortlist the communication channels or media they used to reach prospective students. These media were included in an instrument to elicit information on prospective students' exposure and perceived importance of each medium. Results suggested that students were exposed to the university homepage the most, followed by advertisement in TV. Respondents also reported that university homepage was the most important channel towards their decision to apply to a university.

Keywords: Integrated marketing communication, marketing tools, e-active marketing channels, traditional media, alternative marketing tools

INTRODUCTION

When prospective graduate students search for a program to apply to, they need relevant information from the program. Information such as courses to take and fees are relevant to their decision to choose a program of study. They would want to know the quality and difficulty of these programs whether they suit personal situations and requirements. Universities, just like any other business organizations, have to diffuse information to their prospects in order to seek applicants. As of 2009, there were altogether 147 higher education institutions in Thailand under the governance of the Office of the Higher Education Commission (OHEC). These were classified into 78 public (21 in Bangkok and 57 in other provinces); 69 private institutions of higher education (26 in Bangkok and 43 in other provinces); and 19 community colleges (Office of the Higher Education Commission, 2009). The most recent number of students was from Thailand's Ministry of Education's website which stated that in 2005, public institutions served

The center of IMC is a brand. It is the essence that an organization wants to communicate to others. A brand is like the centre of a wheel with spokes attached to it (Proctor & Kitchen, 2002). Each spoke is a method to communicate with customers. These spokes or communication method should lead to the same point, else marketing attempt could not yield satisfactory results.

Positioning an organization's brand in the minds of consumers is the key component of strategic management for postmodern society (Proctor & Kitchen, 2002). Positive media reputation provides a competitive advantage to organizations (Deephouse, 2000). Advertising and publicity play an important role in creating reputation of an organization (Gray & Balmer, 1998).

IMC activities include advertising, public relations, sales promotions, sponsorships, and direct response marketing. These activities are performed through three basic elements or channels, namely; traditional media, e-active marketing channels and alternative marketing tools such as branded entertainment and lifestyle marketing (Shimp, 2010). In the competitive context, universities and colleges utilize these tools in order to market their institutions and reach applicants because of their efficiency and effectiveness. Li and Hung (2009) investigated various marketing tactics used by school in Taiwan. They found that promotion tactics were the best predictors for positive perception of school image and parents' loyalty. Moreover, it is imperative that universities must seek to understand prospective students' decision-making processes and communicate what they want to know in the right stage not what a university wants to say.

Purchase Decision Process

Kotler and Keller (2008) suggested that consumers go through six stages of purchase decision process. These stages start from problem recognition or identification, information search, evaluation of alternative, purchase decision, and postpurchase evaluation. IMC is important when consumers enter the information search, evaluation of alternative, and postpurchase evaluation stages. Once the prospective students realize their need or want for further study, they would start to search for information. Graduate programs must find some ways to insert their names into the pool of information these prospects gather. Brand awareness and brand image are two elements that create brand knowledge and play an important role in creating brand equity in the consumers' minds (Keller, 2003). Pollock and Rindova (2003) suggested that information repetition was related to communication impact. In the evaluation of alternative stage, prospects would evaluate the offers of each program and compare with their situations and requirements. In this stage, marketing communicators should present benefits of a program over competitors. The postpurchase evaluation stage starts after the prospects enter the program. There is a need for internal operation to meet their expectations so that the prospects would feel that they made the right choice.

Furthermore, Clow and Baack (2010) contended that according to the Hierarchy of Effects Model, consumers go through series of steps before they make actual purchase, that is, awareness, knowledge, liking, preference, conviction, and purchase. IMC's objectives are to create cognitive, affective and conative influences along these hierarchical steps.

Media Exposure

Consumers are not passive receivers of company's communication. They choose what they want to listen to and interpret the information in their own terms. Rice, Rice, and Atkin (1989) described three steps a person processes information from mass media. These selective processes include selective exposure and attention, perception and interpretation, and retention. When exposed to information, such as advertising, individuals choose to receive only some information that is congruent with their prior beliefs. The information received is perceived and interpreted in accordance to the individuals' background and experience. Finally, individuals choose to retain information that they are interested in. Information that

1,644,736 students; private institutions served 250,951 students; and community colleges served 13,365 students (Ministry of Education, 2010). The competition among these institutions is tough. Education institutions need to apply marketing knowledge to draw applicants.

The 4P's of marketing encompass planning strategies for product, price, place or distribution, and promotion (Kotler & Keller, 2008). Marketing of a graduate program needs all of the four marketing strategies. Graduate program deans and directors devise courses that can satisfy potential applicants' needs and wants, tuition that applicants can afford and communicate their offers to prospective students. The programs offered are diverse such as MBA in tourism, MBA in supply chain management, Fast track MBA, M.A. in political science, M.Sc. in management, and so on. An example of product strategy of Ramkhamhaeng University was the programs offered by the Special Program Unit which tailored to prospective students' needs. The Special Program Unit of Ramkhamhaeng University offers 11 MBA programs, apart from the Faculty of Business Administration's programs, with different class schedules catered to fit students' work time limitation (Thongprayoon, 2010). Some programs are offered on Saturday and Sunday only while some programs are offered on Friday evening plus full Saturdays. These programs were created to serve different needs of prospective students. Universities plan their own tuition fees and application systems and communicate to prospective students. IMC tools are used in order to communicate these offerings.

Research projects related to product, price, and place strategies were abundant but study related specifically to communication channels were sparse. The focus of this research project was to investigate the element of university's promotion strategies and tactics for their graduate programs, specifically, the perceptions of graduate students towards communication channels upon decision to apply to an institution. Current graduate students were used as proxy for prospective students. Samples in this study were used-to-be prospective students who had already chosen their programs of study and, hence, became current graduate students. They had real experience and really chose an institution to apply to while prospective students might not. Hence, current graduate students were appropriate informants for this project. This research would shed the light on the perceived importance of each communication channel upon prospects' intention to apply to a graduate program. This would assist in the planning for more effective and efficient communication programs directed to prospective students in the future. The objectives of this project were to:

a. identify university's communication media that graduate degree prospective students were exposed to the most and the least; and
b. assess the media prospective students perceived as the most and the least influential to their decision to choose a program to apply to.

Integrated Marketing Communication (IMC)

In the past, marketing communication was classified as one of the marketing mix or 4 P's. Nowadays, communication theorists as well as marketers agree that communication exists in all aspects of marketing activities. Each element of the marketing mix is strategically designed in order to convince target consumers to buy a product. In other words, product must "speak" to consumers that it can help them solve their problems or satisfy their needs. Integrated Marketing Communication (IMC) is a process to coordinate and integrate all marketing communication tools into seamless programs that maximize the impact on stakeholders at a minimal cost (Clow & Baack, 2010). Communication, both within and outside of a company, must be "integrated". Clear communications among departments, customers, and suppliers should be coordinated to reach customers with a clear and consistent message. As a result, modern managers realize that Integrated Marketing Communication (IMC) is an essential marketing tool. It is important not only to communicate to target group about an organization's offers but also to align all efforts both internally and externally into the same direction to create synergy.

contradicts to their beliefs will be neglected and forgotten. Brock, Albert, and Becker (1970) suggested that information receptivity is based on availability, convenience and preference, familiarity, characteristic of media, and consistency with one's belief. People seek and receive information they want to know. Selection of appropriate media helps to deliver messages to prospective students. Consumers used different channels when they purchase different products (Assael, 1998). It is very likely that prospective students were exposed to clutter of marketing communication but they choose to intercept and belief information only from some channels but not others.

As a result, information intended by universities to reach prospective students might not reach them. Even though some could reach the prospective students, only a few were considered in their decision-making process. Hence, it is important to investigate channels which prospects are exposed to and channels they perceive as relevant to their decision to choose a program for further study.

METHODOLOGY

Population in this study was prospective students of graduate programs of study in Thailand. Collected data were from current graduate students for the reason that they were prospects who really decided to choose a program to study and became graduate students. Hence, current graduate students were deemed suitable informants regarding channels they perceived as important and the influence of these channels on their decision to apply to the programs of their study. The samples from seven graduate programs in two public and two private leading universities in Thailand.

The deans, program directors, and relevant personnel who were responsible for the administration of six graduate programs in four universities in Bangkok were interviewed. Information regarding communication channels they used in order to communicate with prospective students was compiled. The results suggested that the programs used included the following:

1. newspapers advertisement
2. magazine advertisement
3. radio/internal broadcast advertisement
4. TV advertisement
5. poster
6. hanging banners
7. brochures and printed documents
8. participation in radio programs (public relations)
9. participation in TV programs (public relations)
10. press release in print media such as newspaper, magazine, periodicals, etc.
11. direct mail and email
12. university and graduate school web page
13. public website and social network such as hi5, facebook, twitter, and others.
14. university organized exhibitions
15. university attend various types of fairs
16. scholarships offered
17. university's personnel (prospects call-in)

The above items were listed in the instrument except the last item, university's personnel. Including this item in the instrument might confuse and bias the answers because all respondents would be very likely to mention this as the most important because they had to contact them in order to apply. This channel was intentionally excluded. Respondents were asked to recall the time before they made a decision to apply to a program and rank the top three and last three media they were exposed to before they joined the program they chose. Moreover, respondents were asked to rank channels they thought were three of the

most and the least influential media relating to their decisions to apply to their program of study. This instrument was reviewed by three administrators in the field of education and communication to ensure its coverage and validity.

Data were collected during the month of June 2010 from graduate level classes in four universities in Bangkok. Respondents were asked to rank the top three most exposed media using 1 for the media exposed to the most; 2 for media exposed to in the second place; three for the media exposed to in the third rank. On the least side, respondents were asked to assign number 17 for media they were least exposed to, 16 for the less exposed, and 15 for the media exposed minimally. Next part of the instrument elicited information regarding the perceived importance of each media for their decision to apply. Respondents were asked to rank the top 3 most important and 3 least important media they perceived as relevant to their decision to choose a program to apply to. A total of 337 usable sets of questionnaire were obtained.

RESULTS

Data regarding perceptions of each medium's exposure and its respective influences were ranked. A few respondents mentioned friends as their major source of information but this source was not under the control of the university so it was not included.

Top three most exposed media. Median, frequency, and percentage from total number of respondents for top 3 media students they were reportedly exposed to are presented in Table 1.

Respondents agreed that university webpage was the channel they were exposed to the most. The median for advertisement in TV was the second (11.3%). Actually, the highest frequency of advertisement in TV fell on "the most" level (f = 52) but many respondents also rated this as the third most (f = 32) and lower so the median was 2 (f = 38). However, the frequencies for advertisement in TV were far below university webpage.

Table 1
Medians, Frequencies and Percentages of Media Reported as the Most Exposed (n = 337)

Media exposed to	Median	Frequency	Percentage from total respondents
University Webpage	1	162	48.1
Advertisement in TV	2	38	11.3
Brochure	3	45	13.4
Banner	3	34	10.1
Advertisement in Newspaper	3	30	8.9
PR in TV	3	20	5.9
Poster	3	40	11.9
PR in Print Media	3	24	7.1

The third tier of most exposed media consisted of six media. The median for Brochure was 3 (13.4%) while more people rated this medium as 2 (f = 50). The median was influenced by the number of respondents who rated this medium on the little and less exposed side (f = 53) so the median was lowered from 2 to 3. Banner (10.1%) was in similar condition to Brochure whereby the frequency for those who

chose 2 was 37 and that for those who chose 3 was a bit lower (f = 34) but the frequencies on the low exposure side totaled 64.

Thirty six people rated advertisement in newspaper (8.9%) as the second most exposed media (f = 36). However, the median was lowered to 3 by the frequency on the low exposure side (f = 68). Out of 119 respondents who ranked PR in TV (5.9%), 33 rated it as the most exposed media. Again the median was lowered by lower end's ranking scores (f = 43). Poster (11.9%) and PR in Print Media (7.1%) received the highest frequencies in the third ranking (f = 40 and 24, respectively).

The Least Exposed Media

Medians, frequencies, and percentage of the three media the students were reportedly exposed to the least are presented in Table 2. Only the second least (score = 16) and third least (score = 15) exposed media were revealed through their medians.

Table 2
Medians, Frequencies and Percentages of Media Reported as the Least Exposed (n = 337)

Media exposed to	Median	Frequency	Percentage from total respondents
PR in Radio	16 (less)	34	10.1
Advertisement in Magazine	16	33	9.8
Advertisement in Radio	16	27	8.0
Direct Mail and Email	16	26	7.7
University Attends Fairs	16	22	6.5
University Offers Scholarship	16	15	4.5
Public Webpage and Internet	15 (little)	19	5.6
University Exhibitions	15	12	3.6

PR in radio's median was 16 and the frequency was highest (f = 34, or 10.1%). Advertisement inmMagazine (9.8%) highest score fell on 17 (f = 49) but the median was pulled by scores on the more exposed side (f = 28).

Advertisement in radio's median was 16 (f = 27, or 8.0%) while 17 w most chosen (f = 48). The frequency for 15 (f = 31) balanced out the frequency for 17. Direct mail and email (7.7%) highest frequency fell at the score of 17 (f = 32) but this was balanced by scores on the more exposed side (f = 44). University Attends Fairs' highest frequency was for the median (f = 22, or 6.5%).

Scholarship offered's (4.5%) highest frequency was on the score of 15 (f = 35). This score was balanced by the frequency on the score of 17 (f = 31). Public webpage and internet received highest frequency as the third least exposed media (f = 19, or 5.6%).

University exhibition's highest frequency was on the score of 16 (f = 15) but some ranked it on the more exposed side (f = 32). Hence, the median fell on the score of 15 (3.6%).

Media Perceived as the Most Important

Medians, frequencies and percentage of the top three media the students perceived as most important to their decision in choosing a program are presented in Table 3.

Table 3

Medians, Frequencies and Percentages of Media Perceived as the Most Important (n = 337)

Media perceived as important	Median	Frequency	Percentage from total respondents
University Webpage	1	137	40.7
PR in TV	2	34	10.1
Advertisement in TV	2	32	9.5
Brochure	3	50	14.8
Advertisement in Newspaper	3	31	9.2
Public Webpage and Internet	3	28	8.3
University Exhibitions	3	25	7.4
Poster	3	24	7.1

University webpage received highest ranking on the perceived importance item (f = 137, or 40.7%). This is far higher than the second. Results showed two media in the second rank, PR in TV (10.1%) and advertisement in TV (9.5%). Although the frequency for "most important" (1) of advertisement in TV received the highest rating (f = 76), the median was 2 (f = 32) because many people also ranked it in the low end (frequency for 15-16 was 27). For PR in TV, the highest frequency fell on 2 (f = 34). The median for Brochure (14.8%) and advertisement in newspaper was 3 (f = 31, or 9.2%). Even though the highest frequency for advertisement in newspaper was 2 (f = 35), the frequency in the low end pulled the median down (15-17, f = 49). The highest frequency for public webpage and Internet (8.3%) and university exhibitions (7.4%) were 28 and 25 respectively. This also applied to poster (7.1%) where highest frequency was 2 (f = 25) but frequency on the less important end (15-17) was 52.

Media Perceived as the Least Important

Medians, frequencies, and percentage from three media the students reportedly perceived as the least important are presented in table 4.

Table 4

Medians, Frequencies, and Percentages of Media Perceived as the Least Important (n = 337)

Media perceived as less important	Median	Frequency	Percentage from total respondents
PR in Radio	16 (less)	39	11.6
Advertisement in Magazine	16	38	11.3
University offers Scholarship	16	18	5.3
Advertisement in Radio	15 (little)	52	15.4
Direct Mail and Email	15	31	9.2
Banner	15	22	6.5
University Attends Fairs	15	14	4.2
PR in Print Media	15	14	4.2

Some media was ranked as the least important; however, the median did not fall on 17 (the least important). PR in radio's median was 16 with the frequency of 39 (11.6%). Advertisement in magazine (11.3%) received the highest ranking as the least important (f = 58) but there were also high frequency on little (15) and less (16) important (f = 38 and 36), respectively. Scholarship (5.3%) offered by the university was ranked by many people as the least important (f = 45), again being ranked both as little important (15) and very important (1-3)—thus being balanced out as the least important ranking (f = 26 and 24, respectively). Advertisement in radio (15.4%), direct mail and email (9.2%) and banner's (6.5%) medians were 15 (f = 52, 31, 22 respectively). University attends fairs (4.2%) received highest frequency at the score of 16 (f = 23), the median was pulled up to 15 (f = 14) by the frequencies on the important side (1-3) with the frequency of 35. PR in print media (4.2%) also received the highest frequency on the least important side as 17 (f = 16), but its median was pulled up by the frequency on the important side (1-3) (f = 43).

Importance of University Homepage vs. Exposed

The score of the exposure to University homepage at the first quartile (Q1) was 1, the second quartile (Q2) was 1, and the third quartile (Q3) was 2. This corresponded with the perceived importance of University homepage (Q1 = 1, Q2 = 1, Q3 = 2). The comparisons of frequencies are presented in Table 5.

Table 5

A Comparison of Exposure and Perceived Importance of University Homepage (n = 337)

	Exposure		Perceived importance	
	Frequency	Percent/total	Frequency	Percent/total
Most (score=1)	162	48.1	137	40.7
More (score=2)	43	12.8	50	14.8
A lot (score=3)	33	9.8	40	11.9
Little (score=15)	10	3.0	7	2.1
Less (score=16)	2	0.6	10	3.0
Least (score=17)	12	3.6	3	0.9

Importance of Advertisement in TV vs. Exposed

The score of the exposure to Advertisement in TV at the first quartile (Q1) was 1, the second quartile (Q2) was 2, and the third quartile (Q3) was 15. Q1 and Q2 corresponded with Q1 and Q2 of the perceived importance of Advertisement in TV (Q1 = 1 and Q2 = 2). However, Q3 of the perceived importance of advertisement in TV was 3. The comparison of frequencies are presented in Table 6.

Table 6

A Comparison of Exposure and Perceived Importance of Advertisement in TV (n = 337)

	Exposure		Perceived importance	
	Frequency	Percent/total	Frequency	Percent/total
Most (score=1)	52	15.4	76	22.6
More (score=2)	38	11.3	32	9.5
A lot (score=3)	32	9.5	19	5.6
Little (score=15)	21	6.2	10	3.0
Less (score=16)	21	6.2	13	3.9
Least (score=17)	15	4.5	4	1.2

DISCUSSION

University homepage was the main source that prospective students chose to check-in to the most. Students also reported that information on the webpage was important to their decision to apply. Scores on the most exposed and most important scales were far higher than the second rank. The comparison of quartiles revealed that the respondents perceived they were exposed most to University homepage and this media was the most important for their decision to choose an institution for further study. This finding confirmed the theory of selective exposure (Rice, Rice, & Atkin, 1989). University homepage is comparatively reactive than other media such as advertisement in TV. Students were the ones who seek to approach the homepage, that is, they select to be exposed to this media. However, although homepage was exposed to the most, its perceived importance was a bit lower than the exposure rate (7.4%). It is very likely that students obtained information from the webpage but they preferred to check with other sources as well for their decision to choose an institution. In this regard, some students replied in the questionnaire that they asked their friends and university personnel for information as well. These two sources were also important to their decisions but universities have less control on the former source of information, despite their possible control over the latter. Therefore, proper organization and training of university personnel should be prepared for this purpose.

Advertisement in TV was the media reported as the second most exposed to and also the second most important. The central tendency of 2 revealed that students might refer to TV, both for advertisement and PR, as supports for other media. Respondents also reported that public relations campaigns in TV were important to their decisions. They perceived that TV advertisement is important to them but the exposure rate was a bit lower. This might be due to the fact that advertisement in TV is expensive and universities could not afford to advertise as often as they should. However, the scores for exposure revealed that prospects were satisfactorily reached by university's TV advertisement. One important result was that students also rated PR in TV as the second most important while the exposure was not much. The median for PR in TV was 3 while the median for the perceived importance was 2. Considering the lower costs for PR in TV than advertising in TV, universities should utilize more Public Relations programs in TV.

Efforts paid in some sources such as advertisement in magazine, scholarship and others were found to be less relevant to the students' choice as the most important information source for further study. Hence, the universities should emphasize less on these IMC tools and focus more on those perceived as more important by the prospective students.

CONCLUSION AND RECOMMENDATIONS

University's homepage is the media that almost half of the prospective students chose to be exposed to and it is also ranked as the most important. University's website should be used as the main tool in IMC and supported by TV and other media. The institution's own website costs less than other sources and seems to be more effective. An important point is that the websites should be maintained and updated regularly. PR campaigns in TV, radio and newspaper should also be attempted. Universities should revise their IMC programs to match the prospective students' media consumption behavior. Cost per thousand and reaches should be compared among media. University's personnel as a source for communication between

universities and prospective students are not under the scope of this project. Future research into the influence of university personnel and the types of services students expect from them is worth pursuing.

REFERENCES

Assael, H. (1998). *Marketing: Principles & strategy.* Forth Worth, TX: Dryden Press.

Brock, T. C., Albert, S. M. & Becker, L. A. (1970). Familiarity, utility, and supportiveness as determinants of information receptivity. *Journal of Personality and Social Psychology, 14(4),* 292-301.

Chung, K. L. & Chia H. H. (2009). Marketing tactics and parents' loyalty: The mediating role of school image. *Journal of Educational Administration, 47(4),* 477-489.

Clow, K. E. & Baack, D. (2010). *Integrated advertising, promotion, and marketing communications* (4th ed.). Upper Saddle River, NJ: Pearson.

Deephouse, D. L. (2000). Media reputation as a strategic resource: An integration of mass communication and resource-based theories. *Journal of Management, 26(6),* 1091-1112.

Gray, E. R. & Balmer, J. M. T. (1998). Managing corporate image and corporate reputation. *Long Range Planning, 31(5),* 695-702.

Keller, K. L. (2003). *Strategic brand management: Building, measuring, and managing brand equity.* Upper Saddle River, NJ: Prentice-Hall.

Kotler, P. & Keller, K. L. (2008). *Marketing management* (13th ed.). Upper Saddle River, New Jersey: Prentice-Hall.

Ministry of Education (2010). *Students in formal school system by jurisdiction in Bangkok metropolis and other provinces: Academic year 2005.* Retrieved June 29, 2010, from http://www.moe.go.th/English/nu/ stat2005/Student05.pdf

Office of the Higher Education Commission, Bangkok. (2009). *Annual report 2009.*

Pollock, T. G. & Rindova, V. P. (2003). Media legitimation effects in the market for initial public offerings. *Academy of Management Journal, 46(5),* 631-642.

Proctor, T. & Kitchen, P. (2002). Communication in postmodern integrated marketing. *Corporate Communications: An International Journal, 7(3),* 144-154.

Rice, S., Rice, R., & Atkin, C. K. (1989). *Public communication campaigns.* California:Sage.

Shimp, T. (2010). *Integrated marketing communication in advertising and promotion* (8th ed.). South-Western Cengage.

Thongprayoon, W. (2010). *Need to read (Column).* Retrieved June 29, 2010, from http://www.mmm.ru.ac.th/col-readt/mainread.asp

CIGARETTE SMOKING BEHAVIOR CHANGE OF RAJABHAT CHANDRAKASEM UNIVERSITY STUDENTS VIA GROUP COUNSELING BASED ON TRANSTHEORETICAL MODEL

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ABSTRACT

This paper investigated the cigarette smoking behavior change of Rajabhat Chandrakasem University students via group counseling based on transtheoretical Model. The study had two main purposes: (a) the applicability of the transtheoretical model (TTM) to cigarette smoking behavior change of Rajabhat Chandrakasem University students through group counseling processes; and (b) the pretest-posttest comparisons of students' cigarette smoking behavior change between the control group and experimental groups through the process of counseling based on the transtheoretical model. The experimental group was provided with group counseling, following the stages and processes of the transtheoretical model while the control group was provided with smoking information.

Data were collected from both groups at all stages and processes of change covering decisional balance, self–efficacy, and smoking behaviors before and after each of 10 sessions of counseling. Univariate analysis of variance was used to analyze the effect of each session and all sessions on measures assessing the differences in smoking behavior change of both groups.

The findings showed that the experimental group significantly changed their smoking behavior through the application of the TTM to the group counseling at all stages and processes of change in a greater percentage than those in the control group, indicating the applicability of the transtheoretical model to smoking behavior change group counseling. The pretest-posttest comparisons of students' smoking behavior change using univariate analysis of variance was found to be significant.

Keywords: Smoking behavior, the transtheoretical model, stages of change model, health behavior

INTRODUCTION

Smoking is addictive due to the nicotine content of cigarettes. More than 4,000 kinds of poisonous chemicals build up in the nervous system through smoking affecting its work and, consequently, cause diseases. Smoking cigarettes is a major cause of death in the world (MadFadyen, MacAskill, Stead & Eadie, 2002). The World Health Organization (The World Health Organization, 2006) and many

countries in the world realize the effect of smoking cigarettes on the health of people. To fight against smoking, the transtheoretical model or stages of change model has been proposed as a psychological cure to cigarette smoking behavior by technocrats (Kersey, 2006; Prochaska & Norcross, 2007). The transtheoretical model aims to arrive at the way behavior changes in order to help people who smoke cigarettes cut down on their smoking or refrain from smoking. According to Prochaska and Diclemente (1983), Lafferty, Heaney and Chen, (1999), Acton, Prochaska and Kaplan, (2001), Etter and Sutton, (2002), many countries that apply transtheoretical or stages of change model report the satisfactory and effective results of the model.

Cigarette smoking behavior is an important problem at the personal, social, and national levels. Thus, a survey of the cigarette smoking behavior of Chandrakasem Rajabhat University students was conducted. The results revealed that majority of the students have cigarette smoking behavior. Behavioral categories were as follows: everyday smoking, addicted to smoking behavior, smoking cigarettes, very frequently a day, smoking cigarettes immediately on waking up in the morning, craving behavior to smoke cigarettes, and cigarette smoking behavior in all conditions. Students who have the behavior of smoking cigarettes, have the intention to decrease or refrain from smoking, and have the readiness and willingness to take guidance in order to change their cigarette smoking behavior were gathered and volunteered to participate in the study. This research was grounded in the works of many psychologists such as Prochaska and Norcross (2007) and Prochaska, Norcross, and Diclemente (1994). They asserted works that the transtheoretical or stages of change model can decrease cigarette smoking behavior. Their research described the behavioral changes as follows: stages of change, processes of change, decisional balance, and self-efficacy.

For this reason, the idea of applying transtheoretical model or stages of change model to Chandrakasem Rajabhat University students who have cigarette smoking behavior was concerned with the aim of decreasing the number of students who smoke cigarettes. The research results aimed at finding applications in all educational institutions and in both the government and the private sectors to induce change in the smoking behavior of the Thai society in general.

Research Objectives

This study aimed: (a) to find out the applicability of the Transtheoretical model to induce cigarette smoking behavior change; and (b) to compare the pretest and posttest results showing the cigarette smoking behavior change of Chandrakasem Rajabhat University students based on the transtheoretical model or stages of change model before and after the experiment with the groups.

CONCEPTUAL FRAMEWORK

The transtheoretical model which was developed by Prochaska and Diclemente (1983) was used to explore the cigarette smoking behavior and related factors of Chankasem Rajaphat University students. The transtheoretical model is an integrative model of behavioral change. The model focuses on an individual's decision making concerning a problem. It also concentrates on the individuals' dynamic progress and the cognitive behavioral processes that they use while changing their health-related behaviors (Velicer, Prochaska, Fava, Norman & Reading, 1998). The transtheoretical model has been used widely and accepted by researchers and practitioners in health over a relatively short time (Moran, Wechsler & Rigotti, 2004). The central organizing construct of the model is the stages of change. The model includes: (a) a series of independent variables; (b) the process of change; and (c) a series of outcome measures, including the decisional balance and the temptation scales (Velicer et al., 1998).

According to this model, a student moves through five stages of change and 10 major processes of change. The five stages of change are: (a) Precontemplation, has no intention to take action within the next 6 months; (b) Contemplation, intends to take action within the next 6 months; (c) Preparation, intends to take action within the next 30 days and has taken some behavioral steps in this direction; (d) Action, has changed overt behavior for less than 6 months; and (e) Maintenance, has changed overt behavior for more than 6 months.

The 10 major processes of change a student goes through are: (a) Consciousness-raising, recall of information on how to stop smoking; (b) Dramatic relief, an emotional warning about cigarette smoking; (c) Environmental reevaluation, considering the view that smoking can be harmful to the environment; (d) Social liberation, society changing in ways that is easier for the nonsmoker; (e) Self reevaluation, dependency on cigarettes causes disappointment; (f) Stimulus, removes things from home that remind of smoking; (g) Helping relationship, listening to talks about smoking; (h) Counter conditioning, finding a good substitute for smoking; (i) Reinforcement management, providing reward from not smoking; and (j) Self liberation, committing not to smoke.

The study used group counseling based on the Transtheoretical concept of Prochaska and Diclemente (1983). The researcher designed a conceptual framework to apply the stages of change. The conceptual framework of this study shows four stages: (a) Stages of change; (b) Processes of change; (c) Decisional balance; and (d) Self-efficacy. The conceptual framework is illustrated in Figure 1.

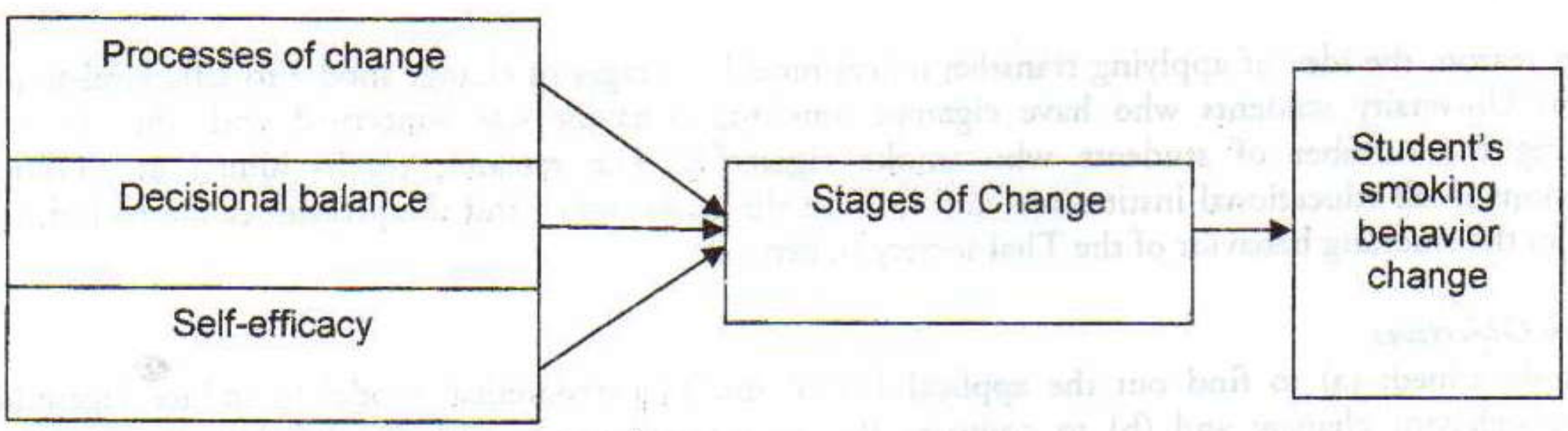


Figure 1. Conceptual framework

In the study, the researcher had three hypotheses to confirm: (a) higher cigarette smoking behavior change of the experimental group in the pre-test and post-test than the control group; (b) higher change in cigarette smoking behavior after group counseling, in maintenance stage than in action stage, preparation stage, contemplation stage and precontemplation stage; and (c) decrease after experiment process in: the everyday smoking behavior, addicted to smoking behavior, smoking very frequently a day behavior, smoking immediately on waking up in the morning behavior, craving behavior to smoke and smoking in every situation behavior.

METHODOLOGY

Quasi-experimental method was used to find out the cigarette smoking behavior change of students at university level in each stage based on the Transtheoretical Model. The population was composed of university students in different faculty who took an interest in applying for a reject-cigarette-smoking project covered by the smoking behavior questionnaire, CAGE (C, cut down; A, annoyance by critics; G, guilt about drinking and E, eye-opener) by Ewing (1984). Sample selection was based on the clinically

significant score of two or more. The sample of 30 students for the study was randomly selected. The students were divided into two groups of 15 each: 15 for the experimental group and 15 for the control group. To analyze the data, pretest and posttest were used. Frequency, percentage, mean, standard deviation, and univariate analysis of variance were also used to confirm the research hypotheses.

RESULTS

The statistical results showed greatly significant difference between the experimental group and the control group at stage of change, processes of change, decisional balance, and self-efficacy of the pretest and posttest. The resulrs are shown in Table 1.

Table 1
Cigarette Smoking Behavior in Each Stage

Cigarette behavior change	Experimental group		Control group		*F*	Sig.
	$\bar{x}$	S.D.	$\bar{x}$	S.D.		
Stages of change						
Pretest	95.7	16.811	93.6	8.715	.179	.676
Posttest	97.3	10.553	157.5	8.007	309.739	.000
	F = .195		*F* = 436.793			
	Sig. = .662		Sig. = .000			
Processes of change						
Pretest	76.7	12.250	76.2	11.046	.016	.901
Posttest	88.6	20.162	156.8	7.418	151.155	.000
	F = 3.795		*F* = 561.799			
	Sig. = .061		Sig. = .000			
Decisional balance						
Pretest	39.2	7.163	39.4	4.580	.015	.904
Posttest	39.8	6.116	77.0	3.261	432.021	.000
	F = .075		*F* = 670.684			
	Sig. = .786		Sig. = .000			
Self-efficacy						
Pretest	31.4	3.480	31.9	4.697	.125	.727
Posttest	32.3	3.518	76.0	2.360	1593.196	.000
	F = 2.010		*F* = 053.910			
	Sig. = .167		Sig. = .000			

Furthermore, the significant change in various types of smoking behavior after group counseling, through the application of the TTM at all stages occurred at the experimental group significantly decreasing their smoking behavior. This was indicated by the means at 4.0, 4.3, 4.6, 4.4, 4.5 and the 4.3 in posttest and

the control group as indicated by the means at 1.6, 1.6, 2.6, 1.9, 2.0 and 2.3. The results are shown in Table 2.

Table 2
Smoking Behaviors of Chandrakasem Rajabhat University Students

Stage of change behavior	Control group (N=15)		Experimental group (N=15)		*F*	Sig.
	$\bar{x}$	S.D.	$\bar{x}$	S.D.		
Every day smoking behavior						
Pretest	1.2	.457	1.3	.617	.113	.739
Posttest	1.6	.828	4.0	.534	88.941	.000
Following- up	1.8	.774	4.2	.414	112.000	.000
	F = 2.185		*F* = 137.534			
	Sig. = .125		Sig. = .000			
Addicted to smoking behavior						
Pretest	1.4	.632	1.3	.488	.104	.749
Posttest	1.6	.816	4.3	.816	80.000	.000
Following- up	2.0	1.133	4.6	.617	64.000	.000
	F = 1.729		*F* = 117.963			
	Sig. = .190		Sig. = .000			
Frequently smoking behavior						
Pretest	2.0	.657	2.0	.703	.072	.790
Posttest	2.6	1.055	4.6	.488	47.373	.000
Following- up	2.6	.975	4.8	.414	60.746	.000
	F = 2.431		*F* = 118.116			
	Sig. = .100		Sig. = .000			
Smoking immediately on waking up in the morning behavior						
Pretest	1.6	.617	1.7	.703	.076	.785
Posttest	1.9	.703	4.4	.910	68.942	.000
Following- up	2.0	.703	4.4	.639	95.495	.000
	F = 1.361		*F* = 63.115			
	Sig. = .267		Sig. = .000			
Craving to smoking behavior						
Pretest	1.6	.736	1.7	.703	.257	.616
Posttest	2.0	.925	4.5	.639	86.154	.000
Following- up	2.2	1.264	4.7	.457	53.200	.000
	F = 1.400		*F* = 121.640			
	Sig. = .258		Sig. = .000			
Smoking in all condition behavior						
Pretest	1.8	.560	1.8	.915	.058	.812
Posttest	2.3	.723	4.3	.617	66.316	.000
Following- up	2.4	.990	4.7	.593	57.800	.000
	F = 3.079		*F* = 69.023			
	Sig. = .057		Sig. = .000			

CONCLUSION, DISCUSSION, AND RECOMMENDATIONS

The purpose of this research was to show that the transtheoretical model or stages of change model can be helpful in decreasing the cigarette smoking behavior of adult students in the university level in Thai institutions. It was found that cigarette smoking behavior of the experimental group has decrease significantly in the following stages of change: process of change, decisional balance, and self-efficacy after giving group counseling bass on the Transtheoretical model. Cigarette smoking behavior of the experimental group after receiving group counseling based on the transtheoretical model decreased significantly at the maintenance level than at the action level, the preparation level, the contemplation level and the precontemplation level ($p < .05$). Cigarette smoking regularly behavior, cigarette smoking addicted behavior, cigarette smoking very frequently all day behavior, cigarette smoking immediately on waking up in the morning behavior, high need of cigarette smoking behavior and cigarette smoking behavior in all the conditions in the experimental group and following up all had significant decrease ($p < .05$) than the control group.

It can be inferred that transtheoretical model can investigate empirical data well. As a matter of fact, several psychologists have applied the model in solving educational problems worldwide. This research shows that student's smoking cigarette behavior significantly decreases at the maintenance stage, which indicates that the group counseling based on transtheoretical model can contain the cigarette smoking behavior of Chandrakasem Rajabhat University student. The application of the model can effectively and efficiently decrease smoking behavior. The results of the study, can be applied to students' other problems such as alcoholism, obesity, and many others.

The use of group counseling format based on Transtheoretical model. In addition, relevant information about this model should be used to develop and test an intervention program to decrease the cigarette smoking behavior of people in schools, universities, public organizations, private organizations, and other institutions.

This research had a limitation in describing the cigarette smoking behavior of students. Further research may be done using a qualitative study or correlational study to explore variables that may be related to cigarette smoking behavior change.

REFERENCES

Acton, G. S., Prochaska, J. J. & Kaplan, S. A. (2001). Depression and stages of change for smoking in psychiatric outpatients. *Addictive Behaviours, 26*(3), 621 –631.

Etter, J. & Sutton, S, (2002). *Assessing stage of change in current and former smokers.* Geneva, Switzerland: University of Geneva Press.

Ewing, J. A. (1984). Detecting alcoholism: The CAGE questionnaires. *Journal of the American Medical Association. 252,* 1905-1907.

Kersey, H. N. (2006). Key steps to success in counseling. Retrieved September 10, 2006, from http://www.athealth.com/Pratitioner/particles/quest_Kersey.NH. html

Lafferty, K. C., Heaney, A. C., & Chen, S. M. (1999). Assessing decisional balance for smoking cessation among Southeast Asian males in the US. *Health Education Research, 14*(1), 139 –146.

MadFadyen, L., MacAskill, S., Stead, M., & Eadie, D. (2002). *A review of adolescent smoking cessation.* Cathays Park, Cardiff: University of Strathclyde.

Moran, S., Wechsler, H., & Rigotti, A. N. (2004). Social smoking among US college students. *Pediatrics, 114*(4), 1028 – 1034.

Prochaska, J.O., & Norcross, J. C. (2007). *Systems of psychotherapy: A transtheroetical analysis* (6th ed.). CA: Thomson Brooks/Cole.

Prochaska, J. O. & Diclemente, C. C. (1983). Stages and processes of self-change of smoking: Toward and integrative model of change. *Journal of Consulting and Clinical Psychology. 51*(3), 390 – 395.

Prochaska, J. O., Norcross, J. C. & Diclemente C. C. (1994). *Changing for good.* New York: Avon Books.

The World Health Organization. (2006). *Framework convention alliance for tobacco control.* Retrieved September 27, 2006, from http://fctc.org/

Velicer, W., Prochaska, J., Fava, J., Norman, G., & Redding, C. (1998). *Smoking cessation and stress management: Applications of the transtheoretical model of behavior change.* Retrieved September 10, 2006, from http://www.uri.edu/Research/cpre/TTM/detaile-doverview.htm

MULTIPLE INTELLIGENCES, LEARNING STYLES, PREFFERED TEACHING METHODS, AND INSTRUCTIONAL MATERIALS OF DLSU-D STUDENTS: IMPLICATIONS FOR TEACHING GENERAL PSYCHOLOGY CLASSES

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ABSTRACT

A total of 2,327 students coming from the different colleges of De La Salle University-Dasmariñas participated in this study. Questionnaires on multiple intelligences, learning styles, and preferred instructional materials and teaching methods were administered to the students. The data gathered were analyzed using descriptive statistics.

It was found that DLSU-D students in the different Colleges were of high Interpersonal Intelligences except for the College of Engineering and Architecture Technology (CEAT) who scored highest in the Logical form of Intelligence. This was followed by the Musical form of Intelligence. As for Learning styles, DLSU-D students were noted to be 100 percent visual learners. Multimedia was shown to be the most preferred instructional materials for all the Colleges while the use of the blackboard was the least preferred by all students. With regard to preferences for teaching methods, DLSU-D students generally prefer interactive class discussions; least preference for all the Colleges was on reporting. The data gathered may be useful not only for DLSU-D but for other groups of students in various universities and across cultures, that would allow teachers to explore effective strategies and provide alternative activities that would best work for their students. It may also have implications in the planning and operations of educational institutions.

Keywords: Multiple intelligences, learning styles, teaching methods, instructional materials

INTRODUCTION

How can we teach the students if we do not know how they learn? Getting to know the students individually and coming up with a profile of their multiple intelligences as was introduced by Dr. Howard Gardner (Armstrong, 2009), their learning styles, their preferences for certain teaching methods and instructional materials are all steps to finding out whether effective learning is facilitated in the classroom.

As Tenedero (2006) says, "There are no mediocre students if only their teachers can properly teach and motivate them through a simple, but effective implementation of tools and methods of instruction which are basically designed to make any subject easier to understand and interesting for the students". With this in mind, Elkind (1989) says that teachers need to develop and field test or pilot their own curricula and materials. He believes that teachers are the best people to determine what works and what does not for

their students. He also believes that changes do occur every year, so much so that development and testing should be an ongoing activity of teachers throughout their careers. One of the goals of this paper is to aid teachers in their class preparations through more information on the way students think and learn in the different colleges of DLSU-Dasmariñas, results of which could also have implications for other colleges and universities as well.

THEORETICAL FRAMEWORK

This study was an attempt to come up with a profile of DLSU-D students with regard to their multiple intelligences, learning styles, preferred teaching methods, and instructional materials.

Multiple intelligences refer to the eight forms of intelligences introduced by Dr. Howard Gardner, namely; verbal/linguistic intelligence, logical mathematical, visual/spatial, bodily/kinesthetic, musical/rhythmic, interpersonal, intrapersonal, and naturalistic which were assessed using the tool of Gay, adapted by Ivanco (1998).

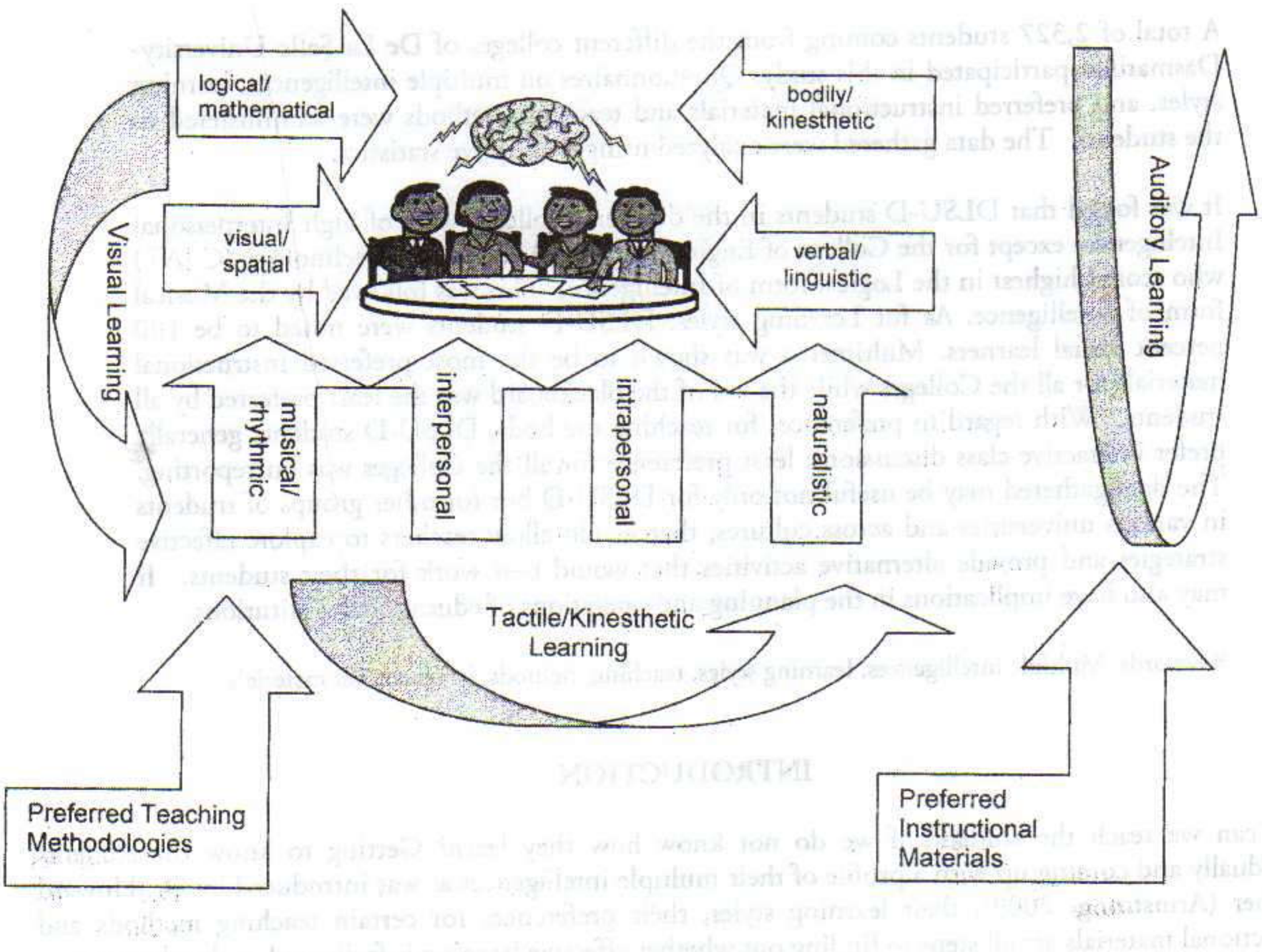


Figure 1. A profile of DLSU-D students in terms of their multiple intelligences, learning styles, preferred instructional materials, and teaching methodologies.

Learning styles in this study refer to self-reports of the respondents as to their preference in learning from external stimuli, i.e., as to how they learn best – either through visuals, auditory, or kinesthetic and tactile. Assessment was done making use of the learning style inventory of Rose (1998), adapted by Grammatis (1998). Preferred teaching methods refer to the various methods on how teachers present the contents of their lessons. Choices included in the self-made questionnaire are lecture, reporting, interactive classroom discussion, role playing, games, recitation, viewing, sharing of personal experiences, and educational trips. Preferred instructional materials refers to the materials or tools which teachers use to deliver or facilitate information to students. In this study, multimedia, projector, blackboard method, and handouts are the choices given in the researcher self-made questionnaire.

Furthermore, the study supports the fact that there are various forms of intelligences and learning styles that are equally important. Therefore, teachers need to plan and implement methodologies that address these needs. Moreover, they also need to prepare and design their instructional materials in ways that will explore the different intelligences and modalities where their students learn best.

METHODOLOGY

The descriptive method was used in this study to answer questions concerning the subject of the study. Self-reports from individuals using standardized instruments such as a multiple intelligence questionnaire, a learning style inventory, and a questionnaire on preferred teaching and instructional materials were administered to all students enrolled in General Psychology during the second semester of school year 2007-2008, first and second semesters of school year 2008-2009, and first semester of school year 2009-2010.

The data gathered were organized and summarized through descriptive statistics. For multiple intelligences and learning styles, they were asked to mark as many items as they would like to under both variables multiple intelligences and learning styles. The higher the score or the more items they marked under particular forms of intelligences as well as learning styles, the more that particular form of intelligence/s and learning style is preferred. For the teaching method and instructional materials, they were asked to number the items in the survey form according to their preferences, with 1 as their most preferred, 2 as the next preferred, and so on, with 5 as the least preferred. So, the higher the score, the less preferred is that particular teaching method and instructional material.

RESULTS AND DISCUSSION

Multiple Intelligences of the Different Academic Units of DLSU-D

The seven academic units involved in the study were College of Liberal Arts (CLA), College of International Hospitality (CIH), Allied Sciences and Health Education (ASHE), College of Science (COS), College of Business Administration (CBA), College of Education (COE), and College of Engineering and Technology (CEAT).

Table 1 shows the summary of the multiple intelligences scores of the different academic units involved in the study, where the students in general were seen to be high on the interpersonal form of Intelligence as evidenced by six out of the seven colleges, namely; CLA being on top of the list; followed by CIH; then by ASHE; then COS; CBA; and lastly, COE.

CBA yielded a mean score of 5.98 on interpersonal, followed by logical ($\bar{x}$ = 5.56), while CLA's mean score on interpersonal was 6.38, which was followed by musical form of intelligence ($\bar{x}$ = 5.56). A mean

score of 5.89 on interpersonal form was yielded by COE and this was followed by the musical form of intelligence, with a mean score of 4.91. COE, CIH, COS, and ASHE showed consistently high scores on interpersonal form. Likewise, the musical form of intelligence came next to the interpersonal form of intelligence for these four colleges. As follows, COE's mean score on interpersonal intelligence was 5.89 and 4.91 for musical form; CIH's interpersonal intelligence mean score of 6.34 was followed by 5.39 for the musical form; mean score of 6.00 on interpersonal form of intelligence for COS was followed by a mean score of 5.30 on the musical form; and ASHE's mean score of 6.25 was followed also by the musical form of intelligence with a mean score of 5.60. CEAT alone had the highest form of intelligence different from the rest of the colleges. It yielded highest on the logical form of intelligence ($\bar{x}$ = 5.88), followed by interpersonal form of intelligence ($\bar{x}$ = 5.68). To summarize, the students of the different colleges of the university are high on the interpersonal form of intelligence as evidenced by six out of the seven colleges, namely, CLA being on top of the list followed by CIH, then by ASHE, then COS, CBA, and lastly, COE.

Table 1
Summary of Multiple Intelligence of the Academic Units of DLSU-D

Prog/n		Verbal	Logical	Visual	Bodily	Musical	Inter	Intra	Natur
CBA	Mean	4.34	5.56	4.58	4.02	4.81	5.98	4.51	4.67
(n = 97)	SD	1.53	2.12	1.79	1.67	1.83	2.17	1.71	1.97
CLA	Mean	4.71	3.96	4.87	4.00	5.56	6.38	4.87	4.63
(n = 365)	SD	1.58	2.12	2.06	1.78	2.07	2.33	1.98	2.11
CEAT	Mean	4.53	5.88	5.01	4.34	5.44	5.68	4.45	4.38
(n = 320)	SD	1.65	2.17	2.02	1.85	2.20	2.28	2.19	2.22
COE	Mean	4.37	3.67	4.14	3.61	4.91	5.89	4.38	4.32
(n = 126)	SD	1.78	2.24	2.00	1.87	1.98	2.41	2.10	2.19
CIH	Mean	4.43	3.93	4.87	4.41	5.39	6.34	4.67	4.76
(n = 385)	SD	1.64	2.14	2.00	1.82	2.01	2.31	2.08	2.34
COS	Mean	4.42	4.82	4.71	4.28	5.30	6.00	4.42	4.27
(n = 363)	SD	1.72	2.30	1.96	1.90	2.22	2.37	2.21	2.27
ASHE	Mean	4.55	4.45	4.95	4.44	5.60	6.25	4.74	5.00
(n = 674)	SD	1.63	2.22	1.99	1.82	2.06	2.32	2.10	2.30
Total	Mean	4.49	4.55	4.84	4.26	5.42	6.14	4.63	4.65
(N = 2330)	SD	1.65	2.29	2.00	1.84	2.09	2.33	2.10	2.26

Learning Styles

In general, all the students in different colleges – CBA, CLA, CEAT, COE, CIH, COS, and ASHE were visual learners. CBA had a mean score of 6.25 on visual learning style; CEAT, 5.82; ASHE, 5.69; CLA, 5.68; COS, 5.46; COE, 5.44; and CIH, 5.23.

Table 3 shows the instructional materials preferences of the different colleges. For this variable, the lower the score, the more preferred is the particular instructional material. The most preferred instructional material by the students is the multimedia ($\bar{x}$ = 2.00). However, COE students ranked handouts ($\bar{x}$ = 2.12) most important while CLA gave equal preference to multimedia ($\bar{x}$ = 2.07) and handouts ($\bar{x}$ =

2.07). The least preferred of all instructional materials was the use of blackboard ($\bar{x}$ = 3.03). The six colleges that showed similar least preference for the use of blackboard are as follows: CIH, 3.21; ASHE, 3.11); COE, 3.02; CLA, 2.98); CEAT, 2.91); and COS, 2.91). The only college that showed least preference for the use of projector is CBA with its mean score of 3.06.

Table 2
Learning Styles per College

Prog/n		Visual L	Auditory	Kinesthetic
CBA	Mean	6.25	3.41	3.58
(n = 97)	SD	1.95	1.61	2.17
CLA	Mean	5.68	3.16	3.71
(n = 365)	SD	2.04	1.65	1.95
CEAT	Mean	5.82	2.94	3.97
(n = 320)	SD	1.94	1.73	2.14
COE	Mean	5.44	2.95	3.04
(n = 126)	SD	1.83	1.80	1.95
CIH	Mean	5.23	2.63	3.41
(n = 385)	SD	1.87	1.56	1.96
COS	Mean	5.46	2.95	3.93
(n = 363)	SD	2.03	1.70	2.22
ASHE	Mean	5.69	3.07	4.02
(n = 674)	SD	1.97	1.70	2.07
Total	Mean	5.60	2.98	3.78
(N = 2330)	SD	1.97	1.69	2.09

Table 3
Instructional Materials preferences of All the Colleges

Prog/n		Multimedia	Projector	Blackboard	Handouts
CBA	Mean	2.32	3.06	2.92	2.90
(n = 97)	SD	1.07	0.93	0.94	2.35
CLA	Mean	2.07	2.88	2.98	2.07
(n = 365)	SD	1.09	0.80	1.11	1.10
CEAT	Mean	1.96	2.83	2.91	2.35
(n = 320)	SD	1.13	0.91	1.12	1.14
COE	Mean	2.14	2.73	3.12	2.13
(n = 126)	SD	1.12	0.84	1.10	1.12
CIH	Mean	2.00	2.76	3.21	2.03
(n = 385)	SD	1.06	0.86	0.98	1.13
COS	Mean	1.94	2.86	2.91	2.29
(n = 363)	SD	1.06	0.85	1.12	1.13
ASHE	Mean	1.94	2.81	3.11	2.10
(n = 674)	SD	1.03	0.88	1.09	1.05
Total	Mean	2.00	2.83	3.04	2.18
(N = 2330)	SD	1.07	0.87	1.08	1.19

Teaching Methods Preference

Table 4 shows the teaching method preferences of the students per college. The overall most preferred teaching method of the students is the interactive class discussion ($\bar{x}$ = 4.09), followed by educational trips ($\bar{x}$ = 4.13). The least preferred method is reporting. Results across colleges vary. Educational trip is

the most preferred in colleges like CBA ($\bar{x}$ = 4.03), CIH ($\bar{x}$ = 3.65), COS ($\bar{x}$ = 4.19), and ASHE ($\bar{x}$ = 4.04). Interactive class discussion is the topmost preference in CLA ($\bar{x}$ = 3.99) and COE ($\bar{x}$ = 3.73) while viewing was the top most preference at the CEAT ($\bar{x}$ = 3.85). Interactive class discussion was the most preferred by CLA and COE. This is consistent with both their choices for handouts as their most preferred instructional material.

SUMMARY AND RECOMMENDATIONS

Interpersonal form of intelligence as the highest form of intelligence except for CEAT whose highest form of intelligence was on the logical form of intelligence. Musical form of intelligence ranked next to interpersonal form of intelligence for all the seven colleges. As for learning styles, the students in all the different colleges showed high scores on visual learning style, followed by kinesthetic learning style, and consistently lowest on auditory learning style. The most preferred instructional material by all the colleges was multimedia except for COE who preferred handouts. CLA preferred both multimedia and handouts. Least preferred instructional material by the different colleges was the use of blackboard, except for CBA who showed least preference for the use of projector. For preferred teaching method, interactive class discussions had the highest weight and was especially noted among COE and CLA students. Highest preference for educational trips was noted among CIH, ASHE, CBA, and COS students; and viewing by CEAT. Least preferred method of all the colleges was reporting, except for COE, who least preferred role playing.

Table 4
Summary of Teaching Method preferences of All the Colleges

Prog/n		Lec	Rep	Intera	RoleP	Games	Rec	View	Sharing	Educt
CBA (n = 97)	Mean	5.24	5.65	4.28	5.44	5.39	5.37	4.45	4.54	4.03
	SD	2.90	2.77	2.41	2.38	2.78	2.53	2.35	2.07	2.32
CLA (n = 365)	Mean	4.10	6.36	4.00	5.78	5.31	5.87	4.36	4.72	4.38
	SD	2.92	2.40	2.33	2.30	2.48	2.36	2.17	2.36	2.70
CEAT (n = 320)	Mean	4.53	6.77	4.05	5.27	4.62	6.22	3.86	5.31	4.23
	SD	3.04	2.14	2.29	2.27	2.52	2.17	2.16	2.38	2.59
COE (n = 126	Mean	3.94	5.56	3.73	5.75	5.14	5.31	4.93	5.57	4.93
	SD	2.89	2.51	2.33	2.23	2.54	2.14	2.27	2.50	2.90
CIH (n = 385	Mean	4.49	6.57	4.22	5.28	4.77	6.40	4.25	4.83	3.65
	SD	2.99	2.34	2.36	2.25	2.47	2.21	2.12	2.42	2.68
COS (n = 363)	Mean	4.30	6.52	4.20	5.44	4.82	6.12	4.21	5.17	4.20
	SD	3.01	2.35	2.46	2.55	2.62	2.07	2.10	2.39	2.54
ASHE (n = 674)	Mean	4.26	6.73	4.06	5.15	4.95	6.37	4.36	4.79	4.04
	SD	2.99	2.27	2.35	2.39	2.41	2.26	2.16	2.42	2.53
Total (N =2330)	Mean	4.34	6.51	4.09	5.38	4.94	6.14	4.28	4.95	4.13
	SD	2.98	2.35	2.36	2.36	2.51	2.25	2.17	2.40	2.62

RECOMMENDATIONS

Interpersonal intelligence or love for cooperative learning skills and the social environment is a strength noted among the students. However, it would also be good if the students could be encouraged to develop their intrapersonal skills through research and reflection, thereby help them avoid making the same poor choices repeatedly in their daily lives. The musical form of Intelligence was next to highest to interpersonal form of intelligence which goes to show that incorporating music in certain lessons can be a vital door to learning for DLSU-D students.

As for learning styles, all the students who participated in the study were noted to be visual learners. They can process information most effectively when the information is seen. Pictures and vivid imaginations are ways by which they learn best. Lectures and traditional discussions are not for them as they have problem with listening as manifested in their lowest score under auditory learning style.

As for teaching methods and instructional materials, preferences varied, choices of which have significance to the program they are in. For instance, both COE and CLA whose jobs as educators, philosophers, psychologists, community and developmental specialists, sociologists, historians, journalists, jobs along communication art and the like, preferred interactive class discussions; while CIH, ASHE, CBA, and COS preferred educational trips as they need to be hands on in their, respective practices and viewing is preferred by CEAT whose nature of work is more technical and needs a lot of watching things as they are built or done.

As the trend now is for student-centered classrooms, teachers should consider the strengths and weaknesses of the students per college in their teaching methodologies and when preparing instructional materials. Teachers should once in a while brain storm with the students as to the projects or outputs that they would like to do; thereby allowing for all forms of intelligences to be maximized.

REFERENCES

Armstrong, T. (2009). *Multiple intelligences in the classroom* (3rd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Colin, R. & Grammatis, Y. (1998). *Learning styles inventory.*

Elkind, D. (1989). Developmentally appropriate practice. *Phi Delta Kappan, 71*(2), 113-117.

Gardner, H. (1985). *Frames of mind: The theory of multiple intelligences.* New York: Basic Books.

Gay, G. & Ivanco, J. (1998). *Multiple intelligence inventory.*

Tenedero, H. S. (2006, September 25). Students are as good as their teachers – educator. *Manila Bulletin.*

Technology and Transformation of Teaching, Learning and Research Paradigms in Knowledge-Based Economy

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INFORMATION AND COMMUNICATION TECHNOLOGY EDUCATION IN SELECTED PUBLIC AND PRIVATE HIGH SCHOOLS IN ABRA

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ABSTRACT

This study investigated the status of information and communication technology education of the selected public and private high schools in the province Abra. The ICT performance of the students was significantly different in favor of the private schools. Public high school administrators and teachers are older in age, higher in educational attainment, longer in the service, received higher salary, and have more ICT seminar/trainings as compared to the administrators and teachers of the private high schools.

Along computing resources, public and private high schools have limited number of computer hardware and software facilities. The administrators of the private high schools are more knowledgeable and skillful users of computer than the public high school administrators while both public and private high school teachers were equally competent in the use of computer. As to the perceived barriers of ICT utilization for teaching and learning, the public and private high school administrators and teachers have similar perception.

Keywords: Information technology, communication technology, public schools, private schools, ICT performance

INTRODUCTION

In line with the modernization program of the Philippine government, secondary schools have been equipped with computer laboratory package consisting of hardware and software applications as well as teachers' trainings. In the province of Abra, both public and private high schools have been integrating information and communication technology (ICT) in the curriculum. However due to the lack of common policy in its implementation, ICT has been integrated in the curriculum in different ways. In the public high schools, ICT is usually offered as a component of TLE subject with 0.3 credit unit, or as a separate subject in second year to fourth year levels with a credit unit of 0.9 per year level. In the special science high school, ICT is a separate subject in all year levels with credit units of 1.2 per year level while in the private high schools, ICT is offered as a component of TLE subject in all year levels with a credit unit of 0.3 to 0.6 per year level. Moreover, the course content includes introduction to microcomputers, application software like word processing, electronic spreadsheet, powerpoint presentation, basic programming, and webpage development. Most of the schools in both public and private high schools have limited computer facilities and teachers' training related to ICT. This study, therefore, is an analysis of the status of the ICT education in Abra focusing on the secondary level. Hopefully, the results of this study could provide useful baseline information to various groups as an avenue to improve computer education program delivery. The study provides administrators baseline data for curriculum planning,

decision making, policy planning, and evaluation with regard to improving computer education program in the secondary level. It also hopes to encourage computer companies to cooperate with schools providing them with computer programs suited to each year level and to establish training tie-ups with them. The results of this study may also serve as a basis for program modification, enrichment, and improvement.

OBJECTIVES

This study looks into the status of information and communication technology education of the selected public and private high schools of Abra for the school year 2007-2008. Specifically, it sought to determine the following:

1. level of performance of the fourth year students in Technology and Livelihood Education (ICT component) and Word Processing Application Skills;
2. profile of the administrators and teachers in terms of the following personal/professional factors: sex, age, educational attainment, length of service, monthly salary, and seminars/trainings attended related to ICT;
3. existing hardware and software facilities of public and private high schools in Abra;
4. perceived level of computer literacy of the administrators and teachers in the public and private high schools in Abra with knowledge and skills of computers, word processing like Microsoft Word, electronic spreadsheet like Microsoft Excel, presentation skills like Microsoft Powerpoint, and Internet Access;
5. perceive the barriers of administrators and teachers in the public and private high schools of Abra with regard to the use of information communication technology for teaching and learning;
6. difference in the level of performance of the fourth year students between the public and private high schools in terms of: Technology and Livelihood Education (ICT component); and Word Processing Application Skills;
7. relationship between the level of performance of the fourth year students in Technology and Livelihood Education (ICT component) and their Word Processing Application Skills;
8. difference in the level of computer literacy of the administrators and teachers between the public and private high schools; and
9. difference between public and private administrators and teachers perceptions on the barriers to the use of information and communication technology for teaching and learning.

CONCEPTUAL FRAMEWORK

The paradigm shows how the three important elements are present in information and communication technology systems in education (Figure 1). Hardware is the physical component of a computer. It includes the central processing unit, input and output devices like monitor, printer, mouse, and keyboard. Software is the nonphysical component of the computer system. It includes written data essential to the operation and maintenance of computers such as programs. Peopleware refers the people or the IT users that operate a computer. All these elements are important, which means that when one is missing, there can be no information and communication technology systems.

The fourth year students, computer teachers and administrators of the public and private high schools were assessed based on their knowledge and skills on the use of application software. Likewise the existing hardware and software facilities of the schools were also surveyed, and the perceived barriers in ICT utilization for teaching and learning on their schools were also determined.

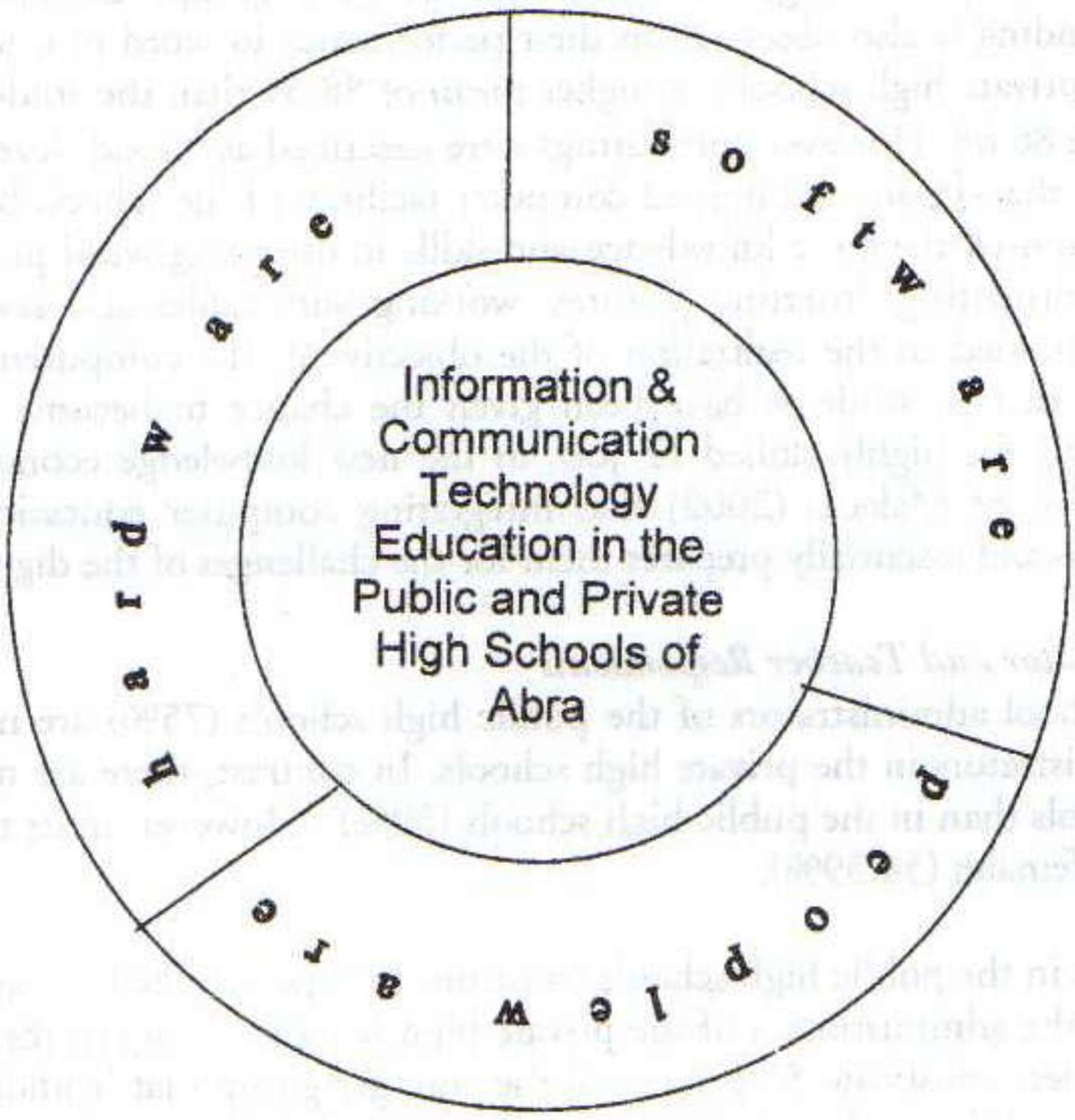


Figure 1. Paradigm of the study

METHODOLOGY

This study employed the descriptive method of research both, correlational and comparative. The respondents included 12 public and 9 private high school administrators, 18 public and 18 private high school teachers, and 146 public and 163 private fourth year students. A questionnaire was designed to gather information on the respondent's profile, inventory of the existing hardware and software facilities, level of knowledge and skills along basic computer in the use of application software and internet access, and perceived barriers to the use of ICT for teaching and learning. Some questions were adapted from the study of Lumibao (2004) and Tinio (2002). The other items in the questionnaire which include skills in MS PowerPoint, Internet Access, and application skills test in word processing, was designed. The administrators and teachers have the same set of questions which include knowledge and skills of computer, word processing, electronic spreadsheet, powerpoint presentation, internet access, and perception on the barriers to the use of ICT for teaching and learning. However, the questionnaire for the school administrators has an additional part which deals on hardware and software classifications and configurations. On the part of the students, an application skills test in word processing was administered to them. The school heads and teachers were also interviewed on some related matters.

FINDINGS

Technology and Livelihood Education (ICT component) and Word Processing Application Skills

From the documentary analysis of the performance of the fourth year students in the Technology and Livelihood Education (ICT component), students of the private high school obtained higher mean rating

of 87.04 against 84.80 in public high school. However, both groups exhibited a "Good" level of performance. Similar finding is also observed on their performance in word processing application skills, that is, students in the private high school got higher mean of 88.39 than the students in the public high school with mean rating 86.68. However both ratings were described as "Good" level of performance. This finding further signifies that despite the limited computer facilities of the school, both public and private high school students acquired the basic knowledge and skills in operating word processing particularly in the skills of creating, formatting, inserting pictures, working with tables and saving a document. The above observation contributed to the realization of the objective of the computerization program of the Philippine government that is, students have been given the chance to become computer literate and prepare them to compete for highly skilled IT jobs in the new knowledge economy. This finding also strengthens the statement of Malacas (2002) that integrating computer education brings the students closer to global standards and essentially prepares them for the challenges of the digital age.

Profile of the Administrator and Teacher Respondents

Sex. Majority of the school administrators of the public high schools (75%) are males while only 11.11 percent are male administrators in the private high schools. In contrast, there are more females (61.11%) in the private high schools than in the public high schools (50%). However, in its totality, majority in the teaching profession are females (54.39%).

Age. The administrators in the public high schools constituted 75 percent belonging to 40 years and above while 77.77 percent of the administrators of the private high schools belong to the same age group. The public high school teachers constitute 50 percent of the younger group that is under 40 years old while a greater percent (83.33%) of the teachers in the private high schools belong to the same age bracket.

Educational attainment. The administrators in the public high schools are more qualified in terms of educational attainment than the administrators in the private schools. Among the 12 administrators in the public high schools, 66.67 percent of them obtained their master's degree, 16.67 percent are doctorate degree holder and the other 16.67 percent have earned master's units. On the other hand, only 33.33 percent in the private high schools obtained their master's degree, 11.11 percent is a doctorate degree holder in education, and 55.56 percent has started their graduate program. Among the 18 teachers in the public high schools 11.11 percent has obtained their master's degree while the same percent with 11.11 percent has doctorate degree.

Length of service. About 41.67 and 11.11 percent of the administrators in the public and private high schools, respectively have rendered 33 to 40 years in the service. Majority (77.78%) of the teachers in the private high schools while 27.78 percent in the teachers of the public schools had taught for eight years and below.

Monthly salary. Majority of the administrators (66.67%) in the public high schools received salary of PhP15,800.00 or higher while no one among the administrators in the private high school received the same salary. About 33.33 percent teachers in the public high schools received a salary higher than PhP12,700.00 a month while none among the 18 teachers in the private high schools received this much. The private high school teacher are paid from PhP6,500 to PhP9,599 (33.33%) while no one among the public school teachers are paid within the lowest salary bracket.

Number of seminars/trainings attended related to ICT. A greater proportion (55.55%) of the administrators in the private schools than those in the pubic high schools (41.66%) attended seminars/training related to ICT. Likewise 94.44 percent of the teachers in the public high schools and 33.33 percent of the private high school teachers had attended seminars/training along ICT.

Existing Hardware and Software Facilities

Hardware. In general, the computers currently in use in both public and private high schools have fast processors and fairly recent operating systems. Majority of the private high schools have Pentium IV and below while the public high schools commonly used Celeron type processors since they are recipients of the same computerization project in the public high school. However, both groups used computers that are capable of running windows 98 or higher windows version. As regards to computer printer, almost all the public and private high schools used dot matrix and inkjet/deskjet printers. However, the availability of other types of peripherals are quite limited. Only the private high schools had flatbed scanners. No one among the school-respondents possessed LCD. Both groups have commonly used automatic voltage regulator (AVR) and a few of them used uninterrupted power supply (UPS).

Both the public and private high school-respondents predominantly used "office software" or "productivity tools"; for example: word processing, spreadsheets and presentation software. Likewise 100 percent of the respondents used windows operating system.

Computer Literacy Level of the Administrators and Teachers

The administrators in the private high schools consistently rated themselves an "Above Average" level in the areas of knowledge and skills of computer, word processing and electronic spreadsheet. This indicates that their job in the office is heavily dependent on the use of computers. On the other hand, the administrators in the public high schools rated themselves "Average" in the areas of knowledge and skills of computer and word processing while they rated themselves "Below Average" level along knowledge of Electronic Spreadsheet, PowerPoint presentation, and internet access. This finding further strengthens the study conducted by Rodrigo (2001) that public school administrators are constrained to utilize ICT in achieving the desired educational competencies. However, teachers of both public and private high schools have similar ratings along the five areas. Both have rated themselves "Outstanding" level on knowledge of word processing, "Above Average" on knowledge and skills in computer, electronic spread sheet, and powerpoint presentation; and "Average" along knowledge of Internet Access.

Table 1
Computer Literacy Level of the Administrator and Teacher Respondents

Area	Administrator				Teacher			
	Public		Private		Public		Private	
	$\bar{x}$	DR	$\bar{x}$	DR	$\bar{x}$	DR	$\bar{x}$	DR
Knowledge and Skills of Computer	2.84	A	3.83	AA	4.19	AA	4.20	AA
Knowledge of Word Processing	2.58	A	3.82	AA	4.29	O	4.41	O
Knowledge of Electronic Spreadsheet	2.22	BA	3.46	AA	3.78	AA	4.19	AA
Knowledge of MS PowerPoint	2.20	BA	1.42	P	3.74	AA	3.69	AA
Knowledge of Internet Access	2.00	BA	1.79	BA	2.87	A	3.25	A

Legend: O - Outstanding AA – Above Average A- Average
BA - Below Average P -Poor

Perceived of Barriers to the Use of ICT for Teaching and Learning

As regards to the barriers to the ICT utilization in the teaching-learning process, *"Insufficient number of computers"* was considered the biggest obstacle by administrator-respondents as indicated by the mean ranking of 2.20 for the administrators in the public high schools and 4.06 in the private high schools. Likewise, teachers in the public and private high schools have the same opinion as shown by their mean rankings of 2.35 and 2.20 respectively. All other issues have mean rankings considerably lower than this.

"Lack of enough technical assistance for operating and maintaining ICT resources", "lack of teacher training opportunities", and *"lack of funds for operations"* were also considered barriers to the use of ICT for teaching and learning. The above observations confirmed the finding of Tinio (2002). On the other hand, the administrators and teachers in both public and private high schools indicated that *teachers feel uncomfortable because some students are more competent with ICT than they are* to be the least barrier to the use of ICT in their schools. This finding contradicted the result of the survey conducted by the Department of Science and Technology as presented by Marivic Abcede that teacher's fear of technology was the key problem for implementing ICT in basic education.

Comparison of the Level of Performance of the Students

There exists a significant difference ($p < .05$) on the level of performance between the public and private high school students in terms of their grades in Technology and Livelihood Education (ICT component). The performance of the students in terms of word processing application was also significantly different ($p < .05$) in favor of the students in the private high schools. This finding could be attributed to the fact that, the private high schools have been integrating computer education in their curriculum, particularly in Technology and Livelihood Education subject in all year levels as compared to the public schools where majority of them are offering computer education only in the fourth year level. This implies further that students in the private high schools have more exposures on the use of computer and they have more chances to have hands on exercises which enable them to acquire more skills and competency on the use of word processing application.

Table 2
Difference Between the Performance of the Fourth Year Students in the Public and Private Schools Along TLE (ICT Component) and Word Processing Application Skills

Area	Public High School	Private High School	Mean Difference	*t*-value Computed	*t*-value Tabular (.05)
TLE-ICT Component	84.80	87.04	2.24	4.815	1.960
Word Processing Skills	86.68	88.39	1.71	2.302	1.960

Relationship Between the Level of Performance Students and Their Grade

There was a significant relationship ($p < .05$) between the level of performance of the Fourth Year students on their grade in Technology and Livelihood Education (ICT component) and Word Processing Application Skills. The overall correlation coefficient value obtained by the public high school and private high schools were 0.55 and 0.47, respectively. This implies that when students get high rating in the TLE-ICT, they have high performance also in word processing application. This is in consonance with the findings of Ignacio (2003) that is, software cognitive skills of students is dependent on their computer hands on ability.

Comparison Between the Administrators and Teachers Computer Literacy

There were significant differences ($p < .05$) in the performance between the public and private administrators in the areas of knowledge of word processing and electronic spreadsheet. This finding implies that administrators in the private high schools have better skills on the use of word processing applications and electronic spreadsheet. This could be due to the fact that school heads in the private high schools are usually the ones preparing computerized reports and documents in their respective schools. On the other hand, there is no significant ($p > .05$) difference in the performance level of teachers in public and private high schools along the five areas. This finding implies that teachers in both public and private high schools have more or less the same skills with respect to ICT literacy.

Comparison Between the Perceived Barriers to the Use of ICT for Teaching and Learning by Administrators and Teachers

There was no significant difference ($p > .05$) on the perceptions of the public and private high school administrators and teachers on the barriers to the use of ICT for teaching and learning in their schools. This finding implies that the administrator- and teacher-respondents had the same perceptions on the barriers to the use of information and communication technology for teaching and learning in their respective schools.

SUMMARY AND CONCLCUSION

In the light of this study, the following conclusions were drawn:

1. Fourth year students of the private high schools perform better than the students in the public high schools in both TLE (ICT component) and word processing application skills.
2. Students who have higher grade in TLE (ICT component) tend to have better knowledge and skills in the use of word processing applications.
3. Majority of the administrators and teachers are female. Public school administrators and teachers are older in age, higher in educational attainment, longer in the service, received higher salary, had attended more ICT seminar/trainings than the administrators and teachers of the private high schools.
4. The computers currently in use in both public and private high schools have fast processors and fairly recent operating systems. However, the availability of other types of peripherals are quite limited. Both schools have used predominantly "office software" or "productivity tools" like word processing, spreadsheets and presentation software.
5. The administrators in the private high schools are more competent than the administrators in the public high schools, particularly on the use of electronic spreadsheet and word processing application software. However, teachers in both public and private high schools are equally competent in the use of computers.
6. The public and private high school administrators and teachers of Abra have the same perception as to the barriers of ICT utilization in their schools on the issues of lack of enough computers, lack of enough technical assistance for operating and maintaining ICT resources, lack of teacher training opportunities, and the lack of funds for operations.

RECOMMENDATIONS

On the basis of the information gathered from the results of this study, the following recommendations are hereby suggested for considerations:

1. There should be a uniform p
2. olicy on the use of ICT in the basic education curriculum. ICT must be studied as a separate subject and be given more time to develop the students' competence in the use of the technology as a tool for learning how to learn.
3. The government together with the private sectors, and other stakeholders in education should continue to provide physical infrastructure and technical support necessary to ITC accessible and useful to all students, teachers, administrators, and support staff.
4. High schools should have at least one computer unit connected to the internet to enable the administrators, teachers, and students to be oriented of the services and capabilities of ICT.
5. The school administrators and teachers in both public and private high schools should be oriented with the findings of this study through training/seminars to enhance their productivity level.

REFERENCES

Abcede, Marivic D. (2000). Status report on the 1996 DECS Computerization Program.

Ignacio, M. P. (2003). *Software cognitive and application skills of the third year students of Lorma Colleges Special Science High School.* Unpublished Master Thesis, University of Northern Philippines, Vigan City.

Lumibao, D. M. C. (2004). *Computer and information technology in the local government units of the first district of Ilocos Sur.* Unpublished Master Thesis, University of Northern Philippines, Vigan City.

Malacas, I. C. (2002). *Factors associated with pupils computer keyboarding skills.* Unpublished Master Thesis, Mariano Marcos State University, Laoag City.

Rodrigo, M. M. T. (2001*). Information technology usage in Metro Manila public and private schools.* Ph.D. Dissertation. School of Computer and Information Sciences, Nova Southeastern University.

Tinio, V. L. (2002). *Survey of information & communication technology utilization in Philippine public high schools.* Foundation for Information Technology Education and Development, Retrieved from http://www.fit-ed.org

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THE SAINT MARY'S UNIVERSITY eLEARNING SYSTEM: A USABILITY ASSESSMENT

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ABSTRACT

Usability assessment or usability test is used to improve system design. This will facilitate the increase in user acceptance and user satisfaction, thereby having a bigger possibility for system adoption.

The objectives of the usability assessment of Saint Mary's University (SMU) eLearning system were to determine the extent to which its interface facilitates student users' ability to complete basic tasks performed in an eLearning system and rate user's satisfaction and to determine missing but needed functions to improve its quality. The findings of this study provided requirements necessary to redesign the interface of the system and include functions that were missing but needed to improve the quality of the existing SMU eLearning system.

A hallway usability test on the SMU eLearning system was conducted. The purpose of which is to assess the usability of the eLearning system's functions, system interface, and student user's satisfaction. A pretested questionnaire, tasks/scenarios evaluation, and post-task satisfaction questionnaire were used to meet its objectives. Six SMU undergraduate students participated in the usability assessment. The number of participants was derived by using the cumulative binomial formula with a problem discovery goal of 99 percent.

Keywords: Usability assessment, e-learning, user's satisfaction, system interface

INTRODUCTION

The Saint Mary's University (SMU) eLearning system is designed to facilitate blended and/or online and distance learning (OLDE). To date, the SMU eLearning system is being used by students enrolled in computer and information technology subjects. It is being used for downloading of lecture materials, forums or news, blogs, sending messages, submission of assignments, and quizzes. Information technology teachers are using the system for uploading of lectures, quizzes, assignments, news, dissemination or sending of messages and other synchronous and asynchronous activities that the eLearning system can be of use.

A usability test on the SMU eLearning system was conducted to determine the extent to which its interface facilitates a student users' ability to complete basic tasks performed on an eLearning system. It also intends to determine missing but needed functions in an eLearning system to facilitate its effective and efficient use. The usability test is conducted with random potential student users of the system, that is, SMU undergraduate students using the hallway usability test. The users or the participants were requested to complete a pretest questionnaire, perform series of tasks, and accomplish a post-test

satisfaction rating and questionnaire. Separate sessions with each participant were recorded and analyzed to identify potential improvements to the eLearning system.

One computer unit connected to the internet was used during the session to test the eLearning system. The testing was done one at a time with each participant answering questionnaires and performing tasks individually, each having their own time schedule. After explaining the purpose of the study, each participant was asked to answer the questionnaire. After which, the participants were requested to log-in to the SMU eLearning system and perform its basic functions. The participants were guided while the performing tasks. The participant's navigational choices, task completion rates, errors, time on task, and verbatim comments were observed and recorded.

eLearning Systems and Usability Assessment

An eLearning system is used to facilitate online and distance learning (Kastelic, 2007). It performs vital functions that will facilitate the effective delivery of instruction. To make the delivery effective, eLearning systems are designed to contain functions that will allow students to register for the course, study the course by being able to download presentations or lectures, asynchronously and synchronously communicate with other students and teachers and be informed of the status of their performance (Ge, & Chao, 2005). eLearning has different practices depending on the institution who adapts it. These practices could be a correspondence course where students can earn credits or universities cannot give credits based on eLearning, on-campus courses where students can earn credits or on-campus courses where eLearning tools are used to enhanced teaching and learning (Watanabe, 2005).

However, studies have been made that software packages, such as eLearning systems, should be tested as to its usability before it is used on a wider scale (Melton, 2006). It is for this reason that many eLearning systems fail due to poor design (Granic, 2008). Users are not satisfied with the system hence, the system fails (Retròia-Bonito et al., 2006; Xiao, 2002). To address this problem, a usability assessment of the system needs to be conducted before it is installed and implemented (Granic, 2008; Retròia-Bonito et al., 2006).

Usability test is used to test users' acceptance where the focus is on the interface design. Studies on usability assessment make use of tasks scenarios that measure quality in terms of users' experience and satisfaction (Granic, 2008).

Usability.gov site uses different factors measured in usability tests; these are:

- Ease of learning - How fast can a user who has never seen the user interface before learn it sufficiently well to accomplish basic tasks?
- Efficiency of use - Once an experienced user has learned to use the system, how fast can he or she accomplish tasks?
- Memorability - If a user has used the system before, can he or she remember enough to use it effectively the next time or does the user have to start learning everything again?
- Error frequency and severity - How often do users make errors while using the system, how serious are these errors, and how do users recover from these errors?
- Subjective satisfaction - How much does the user like using the system?

METHODOLOGY

The hallway usability testing was used where the participants or testers who passed by in the hallway or went in her office. The usability test started with elucidating the overview and the purpose of the usability test. Then, the participants were requested to answer a pre-test questionnaire which contains questions regarding their profile and introductory questions about what the participants know regarding the system and computer manipulation.

After answering the questionnaire, the participants were requested to use the eLearning system and perform tasks on enrolling learners, activate learning materials, communicate with teachers and learners and assess students' performance. The success rate, whether the task was completed with difficulty or completed without difficultly or not done at all were recorded. The time on task, errors committed while performing tasks and verbatim remarks or comments from the participants were recorded. After each task, the participants were requested to rate the interface of the eLearning system using a 5-point Likert scale with measures that range from strongly disagree (1) to strongly agree (5).

The post-task scenario subjective measures include:
1. How easy it is to find buttons or hyperlinks to perform tasks (information display)
2. How easy it is to complete the task when buttons are found (hyperlink activation)
3. How easy it is to navigate from one screen to another (movement)

After performing all tasks, the participants were again requested to answer a 10-item System Usability Scale (SUS) (Brooke, 1996). The SUS uses a 5-point Likert scale that range from strongly disagree to strongly agree. Its subjective measures include: (a) frequency of use, (b) system complexity, (c) ease of use, (d) need for technical support, (e) integration of functions, (f) inconsistency, (g) Learnability, (h) Cumbersomeness, (i) confidence in using the system, and (j) need to learn a lot of things before the effective use of the system.

After performing all tasks, the participants were requested to answer post-task questions. These questions were on (a) overall impression, (b) what the participants like best, (c) what the participants like least, (d) suggestions to improve the system, (e) what the participants feel missing, and (f) final comments or suggestions about the system.

The usability test sample size or the number of participants was derived by using the cumulative binomial formula: $[1-(1-p)^n]$, a formula which is patterned from the problem discovery rate model. This formula supports the claim of several researchers that using small samples in a usability test would identify most usability problems and save both time and money (Turner, et.al, 2006). The computation yielded six participants, hence, the six were subjected to usability test. Four of the participants were male and two were female. Two of the participants' age range from 20 to 21, two from 22 to 23, one ranges from 16 to 17 and one from 18 to 19 years old. All participants have already heard of SMU eLearning System. Four participants spent 11 to 25 hours on the computer, one spent 0 to 10 hours and one spent 26+ hours on the computer. The participants were using the computer for several activities. One hundred percent of the participants were using computers for word processing, research and email while 83 percent for entertainment and programming. About 67 percent used computer to read news and create graphic design, while, not one of the participants used the computer for shopping or banking.

Evaluation Tasks/Scenarios

Tasks of the participants were created based on the four basic functions of an eLearning system. (Ge, & Chao, 2005). These tasks are enrolling learners, activating or opening learning materials, communicating with teachers and/or other learners, and assessing students' performance.

Summary of Data

Table 1 displays a summary of completion rate, time on task, errors, and mean satisfaction.

Table 1
Summary of Completion, Errors, Time on Task, Mean Satisfaction

No.	Task	Task completion		Errors	Average time on task	Satisfaction
		w/ difficulty	w/o difficulty			
A. Enrolling learners						
1	Log-in to SMU eLearning System	0	6(100%)	0	5.67	4.5
2	Access/open the Introduction to Computers/Information Technology course	5 (83%)	1 (17%)	5	70.00	4.2
B. Activate/open learning materials						
3	Open a chapter module	0	6(100%)	0	7.50	4.7
4	Open a PowerPoint presentation	4 (67%)	2 (33%)	3	83.33	4.2
C. Communicate with teachers and/or learners						
5	Send an attachment to your teacher via his/her e-mail address in the eLearning system	-	-	-	630	1.3
6	Add an entry with the text "What would you like to do?" in your blog	5 (83%)	1 (17%)	6	240.00	3.2
7	Open the message found in your forum	5 (83%)	1 (17%)	3	124.17	4.2
8	Send "thank you" message to your teacher	5 (83%)	1 (17%)	5	148.33	3.6
9	View message text history	3 (50%)	3 (50%)	1	56.67	3.9
D. Assess Students Performance						
10	Take a quiz online	0	6(100%)	0	38.33	4.1
11	View feedback or result	1 (17%)	5 (83%	0	15.83	3.6
12	Submit assignment	1 (17%)	5 (83%)	0	35.33	4.6
13	View your grade	2	4 (67%)	0	43.67	4.4

* Satisfaction = Mean combined rating across three post-task measures.

RESULTS AND DISCUSSION

All participants completed Task 1 (log-in to SMU eLearning system), Task 3 (Open a Chapter module) and Task 10 (Take a quiz online) without difficulty. Eighty three percent completed Task 11 (Take a quiz online) and Task 12 (Submit assignment) without difficulty while only 17 percent completed the same tasks with difficulty. About 67 percent completed Task 13 (view your grade) without difficulty while 33 percent completed the same task with difficulty. Fifty percent or half of the total number of participants completed Task 9 (View message text history) without difficulty while the other half completed the same task with difficulty. Thirty three percent completed Task 4 (open PowerPoint presentation) without difficulty while 67 percent completed the same task with difficulty. Only 17 percent completed task 2 (Access/open the Introduction to Computers/Information Technology course), Task 6 (Add entry with the text "What would you like to do?" in your blog), Task 7 (Open the message

found in your forum) and Task 8 (Send "Thank you" message to your teacher) with difficulty while 83 percent completed the same tasks without difficulty. None from among the participants completed Task 5 (Send an attachment or a document to your teacher via his/her email address in the learning system).

Task satisfaction ratings. After the completion of each task, participants rated the ease or difficulty of completing the tasks based on the three factors: (a) ease of finding buttons or hyperlinks to perform tasks or information display; (b) ease of completing the task when buttons\hyperlinks are found or hyperlink activation; and (c) ease of navigating from one screen to another without using the back button or movement.

The 5-point Likert rating scale ranging from 1 (Strongly disagree) to 5 (Strongly agree) was used. Agree ratings are the combined agree and strongly agree ratings combined with a mean agreement rating of greater than 4.0 (> 4.0).

Ease of finding buttons\hyperlinks. All participants agreed that it was easy to log-in to the SMU eLearning system, to find the link to open a chapter module under the course topic outline, and find the link to submit assignment and view grades. On the other hand, 83 percent agreed that it was easy to find the link to open and take a quiz online. Sixty seven percent agreed that it was easy to find the link to open the course required of them to open in the task and find the link to open a PowerPoint presentation. Meanwhile, 50 percent of the participants agreed that it was easy to find the link to open forum, view message history, and view quiz feedback or result.

Completion of task once hyperlink is found (hyperlink activation). All participants agreed that it was easy to log-in to the SMU eLearning system, open course, open a chapter module, open forum, and submit assignment. Majority (83%) agreed that it is easy to open a PowerPoint presentation, send a message, and view grades. About 67 percent agreed that it is easy to add an entry in the blog, and take an online quiz, while 50 percent agreed that it is easy to view message history and view quiz feedback or result.

Navigation from one screen to another (Movement). All of the participants agreed that opening forum, sending message, viewing quiz feedback or result, and viewing grade were easy. Eighty three percent agreed that it was easy to navigate from one page to another after accessing students' course, opening a chapter module, opening a PowerPoint presentation, adding an entry in the blog, viewing message history, taking quiz online, and submitting assignment. Still, 67 percent agreed that it was easy to navigate from one page to another after logging in to the SMU eLearning system.

Time on task. The time on task for each participant was recorded. Some tasks were inherently more difficult to complete than others and was reflected by the average time on task. Task 5 (Send an attachment to your teacher via his/her e-mail address in the eLearning system) required the longest time of completion with an average time of 630 seconds (10 min 30 sec) followed by Task 6 which required participants an average time of 240 seconds (4 minutes) to complete. Task 10 required the participants an average time of 190 seconds (3 minutes and 10 seconds) to complete. Task 8 required the participants an average time of 148.33 seconds (approximately 2 minutes and 30 seconds) to complete while Task 7 only required an average time of 124.17 seconds (approximately 2 minutes) to complete. Task 4 required an average time of 83.33 seconds (approximately 1 minute and 30 seconds). Task 2 required participants an average time of 70 seconds (1 minute and 10 seconds) to complete followed by Task 9 which required an average time of 56.67 seconds to complete. Tasks that required an average time less than a minute are Task 13 with 43.67 seconds, Task 12 with 35.33 seconds, Task 11 with 15.83 seconds, and Task 3 with 7.5 seconds. The least time that required participants to complete is Task 1 with only 5.67 seconds.

Errors. All participants committed a noncritical error in performing Task 6. Five committed a non-critical error in Task 8, three participants in Task 2, Task 4 and Task 7 and one in Task 9. No errors were committed by all participants in performing Tasks 1, 3, 10, 11, 12, and 13. The participants committed non-critical errors because the participants recovered from the errors committed and still completed the tasks required.

Overall Satisfaction Ratings

Eighty three percent of the participants agreed that various functions of the eLearning system were well integrated. About 67 percent agreed that they would like to use the system frequently and that they were confident in using the system. Half of the respondents agreed that they thought the system was easy to use, however, the other half (50%) of the participants agreed that they still need to learn a lot of things before they could get going with the system. Only 33 percent from among the participants thought that there was too much inconsistency in the system. Only 33 percent also agreed that they found the system very cumbersome to use. About 33 percent from among the participants also agreed that they found the system unnecessarily complex, however only 33 percent agreed that they would imagine that most people would learn to use the eLearning system very quickly. Also, only 17 percent from among the participants agreed that they would need the support of a technical person to be able to use this system.

Participant Recommendations, Overall Impression, Likes, Dislikes

Upon completion of the tasks, participants provided feedbacks on their overall impression of the eLearning system, what they liked most and least about the system, what they felt missing, and suggestions for improving the system.

CONCLUSION AND RECOMMENDATIONS

1. A function that will enable students to send e-mail with attachments to their teacher be added in the SMU eLearning system.

2. A users' training on the use of the SMU eLearning system, a users' manual and/or a help button be included in the interface to facilitate effective and efficient use of the eLearning system.

3. The buttons\hyperlinks for blogs, and sending message function be displayed in the course front page local navigation.

4. Courses should be sorted according to school year and semester offered, starting from the most recent and arranged alphabetically for the user to easily locate courses in the eLearning system.

5. File format of topics should be displayed

Most of the participants found that the SMU eLearning system's functions were well integrated, that there was no need for a technical person to be able to use the system, that they feel confident in using the system and that they would like to use the system frequently. However, improvements based on the recommendations still need to be done to ensure system quality and eventually increase user satisfaction.

REFERENCES

Brooke, J. (1996). SUS: A 'quick and dirty' usability scale. *Taylor and Francis.* Retrieved May 1, 2010, from http://www.usabilitynet.org/trump/documents/Suschapt.doc

Granić, A., Glavinić, V. & Stankov, S. (2006). Usability evaluation methodology for web-based educational systems. Retrieved January 20, 2010. from ui4all.ics.forth.gr/workshop 2004/files/ui4all.../evaluation/28.pdf

Ge, W. & Chao, Y. (2005). *Implementation of E-learning system for UNU-IIST (Report No. 320).* The United Nations University-UNU-IIST International Institute for Software Technology. Retrieved April 4, 2010, from http://www.iist.unu.edu/www/docs/techreports/reports/report320.pdf

How is usability defined? (n.d.). Retrieved February 20, 2010, from http://www.usability.gov/basics/index.html

Kastelic, M. & Loncaric, T. (2007). A model of introducing e-Learning system at vocational college for business secretaries. *Issues in Informing Science and Information Technology. 4,* 175-187. Retrieved January 13, 2010, from http://proceedings. Informing science.org/InSITE2007/IISITv4p175-187Kast344.pdf

Melton, J. (2006). The LMS moodle: A usability evaluation . *Language Issues: HCI.* Retrieved March 14, 2010, from http://www.isu.edu/itrc/resources/LMS_Pilot_Report_FINAL_ Fall06.*pdf*

Rentróia-Bonito, M. ,Guerreiro, T., Martins, A., Fernandes, V., & Joaquin, G. (2006, September 7-8). Evaluating Learning Support Systems Usability: An Empirical Approach. *3rd eLearning Conference,* 183-188. Retrieved February 4, 2010 from http://elconf06.dei.uc.pt/pdfs/paper29.pdf

Turner, C. W., Lewis, J. R., & Nielsen, J. (2006). Determining usability test sample size. *International Encyclopedia of Ergonomics and Human Factors,* (2nd ed.). Vol. 3. , 3084-3088. Retrieved March 14, 2010, from http://drjim.0catch.com/2006_Determining UsabilityTestSampleSize.pdf

Watanabe, K. (2005). A Study on Needs for eLearning – Through the analysis of national survey and case studies. *Progress in Informatics.* (2). 77-86. Retrieved April 4, 2010, from http://www.nii.ac.jp/pi/n2/2_77.pdf

What does usability measure? (n.d.). Retrieved February 20, 2010, from http://www.usability.gov/basics/index.html.

TECHNOLOGY TRANSFORMATION OF TEACHING BY STUDENT CENTERED E-LEARNING IN FUTURE OF HIGHER EDUCATION

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ABSTRACT

Higher education has adapted three alternative learning approaches: (a) Teacher-Centered Learning, that is, teacher-centered learning strategies as the focus on the teacher transmitting knowledge, from the expert to the novice (TC- Learning); (b) Student Centered e-Learning, that is, focusing on the students' learning and what students do to achieve this; and (c) the teachers' use of networked multimedia computer technologies (SCe-Learning) to explore knowledge and give more interesting learning to students. Most researches on learning strategy focus on a higher education that applied technology transformation to support teaching and learning process in student-centered e-learning approaches. These approaches implied that students gained knowledge from various experiences in their studies and contribute to this literature by examining how a higher education institution uses this approach to empower learners, improve learning, connect learners to people and resources to support their needs, and to integrate learning with performance and individual with higher institution goals. We surveyed the courses that have been studied by student-centered e-learning in higher education and found significant evidence supporting our theory.

Keywords: Student centered e-learning, technology transformation and learning management system

INTRODUCTION

Technology integration and transformation into the higher education system have come a long way since the 1990s. Many previous studies have discussed the values and influence of technology in education (Cuban, Kirkpatrick, & Peck, 2001; Kay, 2006). The literature of educational technology is gradually changing and showing some increasing that lead to the improvement of education quality. Infrastructures of higher education on the use of computers in the classroom–student ratio increased from the average computer 12:1 in 1998 to 5.4:1 in 2001 in the United States (Kay & Knaack, 2005). Although the debates on the advantages and disadvantages of technology integration and transformation in learning continued to happen, researchers tend to agree that it is important to integrate technology into the educational system because the value of integrating technology has always been to enhance students' critical thinking, collaboration, and problem-solving skills (Jonassen, Peck, & Wilson, 1999).

The use and transformation of technology have to be right in accordance with the teaching practices that have been determined by the Indonesian National Accreditation Board which confirms that the theory of e-learning was the reason for forming an effective strategy in teaching with technology. E-learning method has seen computers as powerful tools to engage students in the active learning processes and to help them

explore, research, and build new ideas (McKenzie, 1998). An examination of the literature showed that educational technology must be an integral part of teaching strategies. Based on the views of e-learning method, the presence of computers in the classroom is very important as media to transform knowledge into a visual form that was easy to understand by student. Eisenberg and Johnson (1996) supported the idea that the use of computer technology skills must be related to the content area and the ability of students in the systematic understanding of science. The learning environment must also actively involve in the investigations and troubleshooting. Holzer (1994) emphasized that the potential impact of computer learning and teaching can only be realized if the learning environment promotes active learning opportunities for students to construct their knowledge in meaningful contexts. Teachers must also play an active role in helping students learn to use computer technology and they must become an integral part of a plan to improve the quality of teaching.

THEORETICAL FRAMEWORK

Use of ICT in Learning Process

The theoretical framework of this study is based on the constructivist learning theory, which articulates that learning to teach is to bring the sorts of changes in knowledge or understanding, skills, and beliefs that may occur through teacher education (Brophy, 1991; Hollingsworth, 1989). Constructivism maintains that individuals create or construct their own new understanding or knowledge through the interaction of what they already know and believe with the new ideas, events, and activities with which they come in contact (Cannella & Reiff, 1994). The applications of constructivist learning theory in the use of ICT in the classroom reveal a shift from using ICT as "instructional tools" that support the teachers' teaching to using ICT as "cognitive tools," "mind tools," and "cognitive partners" to promote meaningful learning that is active, constructive, intentional, authentic, and cooperative (Jonassen, Peck, & Wilson, 1999).

Espinosa and Chen (1996) noted that teacher confidence integrating technology into curriculum increased after specialized training. Other researchers (Anderson & Harris, 1997; Mc. Arthur, 1995) supported the view that teachers need in-service education on specific technology applications to integrate computers into the curriculum in meaningful ways. Becker (1999) found that formal staff development was important in increasing teacher computer usage especially Internet use. Also, he observed that the value of staff development increased when teachers got together informally to discuss teaching practices and project ideas. Because the effect of technology depends on how teachers actually use it in classrooms, professional development is critical if teachers are to take advantage of the instructional opportunities possible with computers.

Student Centered Learning

Prosser and Trigwel (2002) described student-centered learning (SCL) as "students might not only choose what to study, but how and why that topic might be an interesting one to study". They also emphasized Rogers' belief that students' perceptions of the world were important, that they were relevant and appropriate. This definition, therefore, emphasizes the concept of students having "choice" in their learning. Harden and Crosby (2000; 335) described teacher-centered learning strategies as the focus on the teacher transmitting knowledge, from the expert to the novice. In contrast, they described student-centered learning as focusing on the students' learning and "what students do to achieve this, rather than what the teacher does". This definition emphasizes the concept of the student "doing". Other authors articulate broader, more comprehensive definition. Some of the literature on student-centered learning include the followings tenets: (a) the reliance on active rather than passive learning; (b) an emphasis on deep learning and understanding; (c) increased responsibility and accountability on the part of the student; (d) an increased sense of autonomy in the learner; (e) an interdependence between teacher and learner;

(f).mutual respect within the learner teacher relationship; and (g) a reflexive approach to the teaching and learning process on the part of both teacher and learner. Brandes and Ginnis (1998) used in second level education (postprimary), entitled "A Guide to Student-Centered Learning". They present the main principles of student-centered learning as:

1. The learner has full responsibility for her/his learning;
2. Involvement and participation are necessary for learning;
3. The relationship between learners is more equal, promoting growth, development;
4. The teacher becomes a facilitator and resource person;
5. The learner experiences confluence in his education (affective and cognitive); and
6. The learner sees himself differently as a result of the learning experience.

The theoretical standing of student-centered learning is often surprisingly absent in the literature. However, it appears to relate primarily to the constructivist view of learning in the importance it places on activity, discovery, and independent learning (Carlile & Jordan, 2005). Cognitive theory also highlights activity but in a different form than that supported by the constructivists. The cognitive view supports the idea that the activity of learning is computed in the head, or as often described "in the mind". The constructivist view of activity is related more to performing physical activities. Student-centered learning has some connections with the social constructivist view, which emphasizes activity and the importance of communities of practice/others in the learning process. However, the definitions of SCL do not necessarily highlight the importance of peers in learning. In summary, it appears from the literature that some view student-centered learning as the concept of the student's choice in their education; others see it as being about the student doing more than the lecturer (active versus passive learning); while others have a much broader definition which includes both of these concepts, but describes the shift in the power of relationship between the student and the teacher.

Electronic Learning (e-learning)

Electronic learning (e-learning) is the systematic use of networked multimedia computer technologies to empower learners, improve learning, connect learners to people and resources supportive to their needs, and to integrate learning with performance and individual with organizational goals, or it can be described as pedagogy, empowered by digital technology (Nichols, 2005). There are three steps to support technology while using e-learning method: first step is preparation to making modules (input) such as office application, animation, video streaming, link to web, voice recorder, and editor; second is setting environment (delivery) such as email, chatting, search engine, learning management system, video conference, and digital library; and third is evaluation (output) such as email, chatting, and video conference.

Student-Centered e-Learning

According to Open and Distance Learning Quality Council-ODLQC (2001), student-centered e-learning (SCeL) activities means learning that focuses on students activity by using electronic learning with the conditions as follows:

1. Learning activities conducted through the utilization of Internet network;
2. Availability of learning support services that can be utilized by students, such as CD-Rom or printed;
3. Availability of teacher that can help student to learn;
4. Existence of institutions that manage e-learning activities
5. Existence of a positive attitude toward educators and educational staff of computer and internet technology;
6. Existence of a learning system design that can be learned and known by every participant;
7. A system of evaluation of progress or development of the study participants learn; and
8. Existence of a feedback mechanism developed by the providers.

Research Method

All of the courses that have been studied by using SCe-L at Perbanas Business School were observed. Thus, it is a qualitative research in nature (Moleong, 2000) in which all the courses were observed based on the criteria adopted from ODLQC (2001). There are 265 courses which were observed using the following criteria:

1. Whether it has a planning of learning.
2. Whether it is conducted by using internet network
3. Whether it has complete contents of e-learning.
4. Whether it has feedbacks.
5. Whether it has assessments of the learning process.

This study started from investigating the number of courses which has been studied by using SCe-L with the status of (a) being active, (b) in progress, and (c) nonactive. First of all, being active means that all of the criteria are fulfilled. Secondly, being in progress means that only some of the criteria are fulfilled. Finally, being non active means that none of the criteria is fulfilled. After all of the active courses using SCeL are investigated, they were compared with the sum of actual courses. From this, it can be determined which courses are considered to have implemented SCe-L. This observation took about three months.

RESULTS AND DISCSSUSION

Before the year 2000, Perbanas Business School was still using teacher-centered learning (TCL). Teacher-centered learning strategies focused on the teacher transmitting knowledge, from the expert to the novice. From 2000 until 2006, the school has implemented TCL method that led to strengthening the student-centered learning (SCL) method. SCL as "students might not only choose what to study, but how and why that topic might be an interesting one to study" was combined to "strengthen aspects of soft skill to students in the classroom and in the laboratory". In 2007, through a grant provided by the Directorate General Higher Education (DGHE) for reinforcement of learning technology, Perbanas Business School has been designing student centered e-learning system with focus on the students' learning and what students do to achieve this, rather than the teachers' use of networked multimedia computer technologies. Based on Table 1, the number of courses taught to undergraduate students in management is 58, but only five courses were thought with SCeL. For undergraduate students in accounting, there were 61 courses and 12 courses are taught with SCeL. For graduate in management, there were 72 courses but only 28 courses have been implemented with SCeL, and for graduate of accounting there were 54 courses that were taught and 26 courses have implemented SCeL. In the postgraduate, there were 20 courses available, seven of which implemented SCel technology.

Table 1
Result of Observation

Department	Courses offered	Course's status					
		Being active	%	In progress	%	Not active	%
Undergraduate in management	58	5	9	2	3	51	88
Undergraduate in accounting	61	12	20	2	3	47	77
Graduate in management	72	28	39	3	4	41	57
Graduate in accounting	54	26	48	2	4	26	48
Postgraduate	20	7	35	1	5	12	60

Source: data observe (2010)

This research also found that the most active in using SCeL method were graduate students in accounting department with 48 percent of all subjects presented have used SCeL. There were 17,896 users that have used e-learning since 2007 until 2010. It was also noted that advanced accounting courses and advanced marketing management courses have been equipped with advanced animation and video streaming simulations to explain the material in each class meeting. This can be realized because two of those courses have obtained funding from the Directorate General Higher Education (DGHE) and the content displayed on each of this course was very good.





Figure 1. Layout and design e-learning of Perbanas Business School
Source: http://www.kuliah.perbanas.ac.id (2010)

IMPLICATION

The Curriculum Design

This research had an impact on curriculum design which allows the application of distance learning using e-learning technologies. Students no longer depend on class meetings with teachers, students who want to acquire knowledge are free to do so. SCeL also had an impact on the form of assignments and assessment of students. Curriculum design should be made to ensure that the curriculum should match the learning goals to be achieved. One thing that needs to be considered in curriculum design related to the implementation of SCeL is that the internet network infrastructure must be robust.

The Assessment

Black (1999) has summarized some of the difficulties highlighted in the assessment literature that indicators of students rating each task should be very clear. Forms and methods of assessment for each task should also be clearly understood by the lecturers. More critical assessment which involved aspects of soft skills will be difficult to achieve using SCeL method because many of the aspects require soft skill and face to face interaction between lecturers and students. Addition of formative assessment, which emphasizes feedback to students on their learning, would enhance their learning capacity by developing a formative assessment in their program. Examples of formative assessments include feedback on essays, written comments on the task, and marks the multiple choice questions.

Critiques of Student Centered e-Learning

Student-centered e-learning, inspite of its popularity, is not without its critics. The main critique of Student Centered e Learning was the student becomes the individual learner. In addition, there were some difficulties in implementing student-centered e-learning. These are the resources needed to implement it, infrastructure of technology information, and students' lack of familiarity with the computer system like

learning management system (moodle). Using SCeL method requires students to have a note book, personal computer, and modem to get the benefits of e learning

CONCLUSION

It seems that implementing SCeL in higher education is not easy. This can be seen from the research results that the highest percentage of SCeL implementation is achieved by the department of accounting graduate program which is still below 50 percent. This might be due to the factors such as: (s) most of the lecturers have not yet been acquainted with e-learning; and (b) low network of internet which causes difficulty in uploading the materials. In fact, by using e-learning, the students and teachers could interact to share their knowledge without distance barrier. In the near future, the college could take some efforts to enhance the SCL by implementing the e-learning. This could be done by making the lecturers aware of the importance of e-learning. This research recommends that the college should give training or workshop on creating e-learning. Moreover, lecturers' perception should also be included.

REFERENCES

Anderson, S. E. & Maninger, R. M. (2007). Preserves teachers' abilities, beliefs, and intentions regarding technology integration. *Journal of Educational Computing Research, 37*(2), 151–172.

Anderson, S. & Harris, J. (1997). Factors associated with amount of use and benefits obtained by users of a statewide educational computing network. *Educational Technology Research and Development, 45*(1), 19–50.

Becker, H. J. (1999). Internet use by teachers: Conditions of professional use and teacher- directed student use. *Teaching, Learning, and Computing: 1998 National Survey.*

Black, P. (1999). Assessment, learning theories and testing systems. Murphy (ed.). *Learners, Learning and Assessment.* London: Open University Press.

Phyllis, B. & Maryellen, W. (2008). *Developing learner-centered teaching: A practical guide for faculty.* Wiley, John & Sons, Incorporated.

Brandes, D. & Ginnis, P. (1998). *A guide to student centered learning.* Oxford: Blackwell.

Bredo, E. (1999). Reconstructing educational psychology. In P. Murphy (Ed.), *Learners, Learning and Assessment.* London: Open University Press.

Brophy, J. (1991). *Advances in research on teaching: Teachers' knowledge of subject matter as it relates to their teaching practice (Vol. 2).* Greenwich, CT: JAI.

Burnard, P. (1999). Carl Rogers and postmodernism: Challenged in nursing and health sciences. *Nursing and Health Sciences, 1*, 241-247.

Bracey, G. (1994, Winter). Computers improve teaching. *Electronic Learning (Special Supplement), 12.*

Cannella, G. S. & Reiff, J. C. (1994). Individual constructivist teacher education: Teachers as empowered learners. *Teacher Education Quarterly, 21*(3), 27–38.

Carlile, O. & Jordan, A. (2005). It works in practice but will it work in theory? The theoretical underpinnings of pedagogy. In S. Moore, G. O'Neill, and B. McMullin (Eds.). *Emerging Issues in the Practice of University Learning and Teaching.* Dublin: AISHE.

Cuban, L., Kirkpatrick, H., & Peck, C. (2001). High access and low use of technologies in high school classrooms: Explaining an apparent paradox. *American Educational Research Journal, 38*(4), 813–834.

Eisenberg, M., & Johnson, D. (1996). *Computer skills for information problem solving: Learning and teaching technology in context.* Syracuse, NY: ERIC Clearinghouse for Information and Technology. (ERIC No. ED 392 463).

Espinosa, L., & Chen, W. (1996). The effect of teacher inservice training on technology and multiage grouping: Year one evaluation of constructing and networking for multiage learning project. *Journal of Computing in Childhood Education, 7*(1/2), 13–38.

Gay, L. R. & Airasian, P. W. (1999). *Educational research: Competencies for analysis and application* (6th Ed.). Englewood Cliffs, NJ: Prentice-Hall.

Harden, R. M. & Crosby, J. (2000). AMEE Guide No 20: The good teacher is more than a lecturer-the twelve roles of the teacher. *Medical Teacher 22*(4), 334-347.

Hollingsworth, S. (1989). Prior beliefs and cognitive change in learning to teach. *American Educational Research Journal, 26*(2), 160–189.

Holzer, S. M. (1994). From *constructivism to active learning. The Innovator.* Retrieved from http://www.succeed.ufl.edu/innovators/innovator_2/intro.html.

Jonassen, D. H., Peck, K., & Wilson, B. G. (1999). *Learning with technology: A constructivist approach.* Upper Saddle River, NJ: Prentice-Hall.

Kay, R. H. (2006). Evaluating strategies used to incorporate technology into preservice education: A review of the literature. *Journal of Research on Technology in Education, 38*(4), 383–408.

Kay, R. H., & Knaack, L. (2005). A case for ubiquitous, integrated computing in teacher education. *Technology, Pedagogy and Education, 14*(3), 391–412.

MacArthur, C. A., Pilato, V., Kercher, M., Peterson, D., Malouf, D., & Jamison, P. (1995). Mentoring: An approach to technology education for teachers. *Journal of Research on Computing in Education, 28*, 46–62.

McKenzie, J. (1998). Scoring high with new information technologies. *Now On, 8*(7). Retrieved from http://www.fno.org/apr99/scoring.html

Mergendoller, J. R. (1997). Technology and learning: The research. *Principal, 76*(3), 12–14.

Moleong, Lexy (2000). Qualitative research methodology, 13th, Bandung, PT. Remaja Rosdakarya.

Nichols, M. & Anderson, B. (2005). Strategic e-learning implementation. In *Educational Technology and Society, 8*(4), 1-8. Wiley, John & Sons, Incorporated

Open & Distance Learning Quality Council-ODLQC. (2001). Retrieved from http://www.odlqc.org.uk

Prosser, K. & Trigwell, M. (2002). Experiences of teaching in Higher Education. In *Understanding Learning and Teaching: The Experience of Higher Education.* Buckingham: SRHE and Open University Press.

STUDENTS' PERCEPTION ON IT-BASED LEARNING: A CASE OF FOUR HIGHER EDUCATION INSTITUTIONS IN SURABAYA

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ABSTRACT

The implementation of Student-Centered Learning (SCL) approach in learning activities in the colleges is determined by the availability of information technology (IT) which is suitable for the student needs. This study aimed to examine the students' perception in Surabaya using IT and e-learning and internet-based academic information system IBAIS. A sample of 200 students was selected by means of convenience sampling technique from four colleges in Surabaya, that have already applied the learning activities in. The data were collected through questionnaire method. The students' opinion about the effectiveness of using was measured by computer knowledge parameter, e-learning knowledge, academic information system knowledge, access frequency on using e-learning and academic information system, and also the effect of using e-learning on learning activities. The results are expected to provide the benefit for the college's management in determining the policy on using IT and academic information system (AIS) for the learning process and activities. The results of this study indicate that the use of IT in learning process (e-learning) and IBAIS can facilitate students to get the desired information, an added value, and it has changed the life style of students in the learning process. As such, they can get pride in their social relationship. Finally, the experience of using e-learning has created a desire for the students to recommend it for their friends.

Keywords: Perception, information technology (IT), academic information systems (AIS)

BACKGROUND

The development of information technology (IT) has grown rapidly and has received a positive response from the community. In the educational world, especially higher education, IT development has provided opportunities for learning lessons from a change of approach that focuses on teachers or teacher-centered learning (TCL) to Student-Centered Learning (SCL). The important factor that determines the success of higher education in using the media of e-learning in SCL is the availability of IT in accordance with the needs of the students. Associated with the implementation of SCL, some universities need to conduct a needs analysis, a preparation of the necessary requirements, a design of the learning model, and its development. In Surabaya, only four universities have already developed IBAIS and e-learning. These colleges have allowed all academicians to have the opportunity take advantage of information technology systems (ITS). The study of the perceptions of students about the use of e-learning and IT by these four internet-based colleges has never been done.

LITERATURE REVIEW

The term perception is usually used to reveal something about the experience of one thing or something which happened. It is a process by which individuals organize and interpret their sensory impressions in order to give meaning to their environment (Robbins 2006). Perception is a mental process that produces shadows on the individual self, so it can recognize an object by way of a specific memory associations on senses of vision, sense of palpability, and so forth which ultimately shadow what can be realized. In addition, perception is the process by which people select, organize, and interpret information to form a meaningful picture of the world (Kotler & Armstrong 2008). For example, people can form different perceptions with the same stimulation for three perceptual process (related to sensory stimulation: selective attention, selective distortion and selective retention). Perception includes the acceptance of a stimulus (input), the organization of stimulus and stimulus translation or interpretation that has been organized in a way that can influence behavior and shape attitudes, so that people tend to interpret other people's behavior in accordance with his own state (Gibson 1986). Perceptual process can be shown in Figure 2.1.

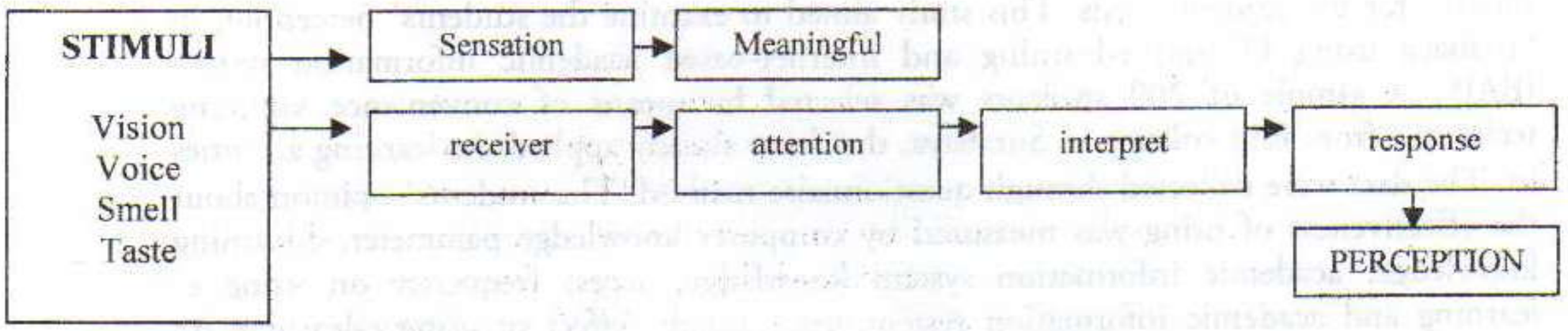


Figure 2.1: Perceptual Processes by Michael R Salomon (1996)

The Role of Media in Teaching-Learning Process

Teaching strategies are defined as the number of steps in engineering so as to achieve specific teaching purposes (Muhibbin Shah, 2002). This involves several steps, such as the following.

1. Formulating strategies target the learning process which is concerned with strategies that will be used by teachers in determining the pattern of teaching to achieve the goals of teaching and learning process;
2. Planning strategies of teaching and learning process, associated with the implementation of measures to reach targets. Including the planning of instructional media that will be used; and
3. Strategies for the teaching-learning process, dealing with the approach to the teaching systems that really fit with the subject of teaching materials.

In practice, techniques and the use of media contribute a large part in attracting attention of students in teaching and learning. Basically, the media has two main functions, namely; as a tool and a source of learning for students (Djamarah, 2002). In addition, instructional media can be grouped into several types (Umar Hamalik, 1986 & Djamarah, 2002):

1. Auditif media, is a media which only rely on the ability of sound, like a tape recorder.
2. Visual media, is a media which only rely on senses of sight in a visual form.
3. Audiovisual media, a media that has elements of sound and image elements. These media are divided into two types and have a better ability.
4. Audiovisual silent, featuring the voice and visual silence, like sound slide film.
5. Audiovisual motion, namely the media elements that can display sound and moving images, such as film, video, and VCD Cassette.

e-Media Model. e-Media or electronic media meaning are based on electronic equipment. e-Media has developed invariably, along with the development of electronic media, such as e-conventional media like

cassette tapes of teaching and educational TV programs; computer-based e-media consisting of CDs, MP3 CDs, VCDs and DVDs; and e-based media Internet such as e-news, e-journal, e-books, e-Consultant, Chats, Newsgroups, and so on (Oetoma & Priyogutomo 2004). With the development of e-media technologies, as a medium of education, the infrastructure and facilities for its utilization are also growing; one of these tools is the computer. Computer-assisted instruction is a business conducted by experts from several decades ago because the rocks of this computer running the teaching process are more interactive and help the realization of independent learning.

With the development of this computer technology, the teaching method is also improving, so the teaching process that uses this computer is also becoming more effective. Yet, basically, it can be categorized into two: computer-based training and web-based training.

1. Computer-based Training (CBT)
   CBT is a computer-based education process which utilizes media and disk-based CD-ROM as a medium of education (Soekartawi 2003). By utilizing this medium, a CD ROM can consist of video clips, animations, graphics, sound, multimedia, and application programs. With CBT, the learning process through classroom can still be done, so the interaction in the education process can continue, assisted by independent learners in using CBT.

2. Web-based training (WBT)
   Web-based training (WBT) is often identified with e-learning. The Internet network can also be utilized, so that the learner can can access the material anywhere and anytime (Rossett, 2002). E-learning means learning by using electronic devices aid services, especially computers (Soekartawi, 2003) because it is often referred to as the on-line course. In various e-learning literature, it can not be separated from the Internet network because the media are used as means of presenting new ideas and learning.

The computer development is still encountered by the following obstacles to apply e-learning systems: (a) lacking the ability to use the Internet as a source of learning; (b) costs are still relatively expensive for the early stages; and (c) insufficient attention from various parties on learning through the Internet; and (d) inadequate supporting infrastructure for certain areas (Soekartawi, 2003).

In addition to the obstacles mentioned above, another weakness is: loss of nuance education between educators and students. Technology-based educational activities (TBEA) will provide a multiplier effect on virtually all of the educational activities, thereby narrowing the gap of the latest technology in education. An educational activity based on IT provides two advantages: First, it can be as a stimulus for the community to be more appreciative of education and proactive in maximizing the potential of education. Second, it provides ample opportunity for students to use any existing potential that can be obtained from sources that are not limited.

E-Learning Definition

E-learning is learning that uses electronic circuits (LAN, WAN or Internet) to deliver learning content, interaction, or guidance (Kumar, 2002). E-learning refers to the use of Internet technology to deliver a series of solutions that can improve knowledge and skills (Rosenberg, 2001). Cambell, 2002; and Kamarga, 2002. The term "e" or an abbreviation of electronic e-learning is used as a term for any technology used to support the efforts of teaching through electronic internet technology. Internet, Intranet, satellite, tape recorder/audio/video, interactive TV, and CD-ROM are part of the electronic media used. Learning should be submitted in "synchronously" (at the same time) or "asynchronously" (at different times). Learning materials delivered via this medium include text, graphics, animations, simulations, audio, and video.

E-learning based learning is the main focus of the students. Students learn to be independent at a certain time and are responsible for learning. Learning atmosphere-based e-learning would "force" students to play a more active role in learning. Students make a plan and seek the materials by themselves (Antonius, Onno, 2002).

E-learning philosophy can be described as follows. First, e-learning is the delivery of information, communication, education and training on-line. Second, e-learning provides a set of tools that can enrich the value of learning in the conventional (conventional learning models, the study of textbooks, CD-ROMs, and computer-based training), so it can answer the challenges of globalization development. Third, e-learning is not meant to replace the conventional model of learning in the classroom, but to strengthen the model of learning through content enrichment and development of educational technology. Fourth, the capacity of students is very varied depending on the shape, content, and manner of delivery. The better the alignment between the content and tools to deliver learning style, the better the student capacity, which in turn will give better results. On the other hand, e-learning characteristics consist of, among others, (a) utilizing electronic technology services; where lecturers and students, students and fellow lecturers, and fellow students or lecturers can communicate with relative ease without being limited to protocol; (b) harnessing the benefits of a computer (digital media and computer networks); (c) the use of teaching materials is independent (self-learning materials) and are stored in a computer so they can be accessed by faculty and students anytime and anywhere when the needs arise; (d) exploiting learning schedule, curriculum, results of the learning progress, and matters related to educational administration can be seen any time on the computer (Cisco 2001).

To be able to make e-learning attractive and desirable, its design must be: simple, personal, and fast. Simple system that will facilitate students in using technology and the existing menu, with the ease at which the panel is provided, will reduce the introduction of e-learning system itself, so that participants can learn efficiently during the process and not on learning how to use e-systems. Personal means that teachers can interact with how a lecturer who communicates with students in the class. With an approach and a more personal interaction, the students note the progress all the problems they face. This would make the students feel at home with the system. This service is supported by the speed, quick response to complaints, and needs of other students, thereby learning repair can be done as quickly as possible by a teacher or administrator (Antonius & Onno, 2002).

Academic Information System (AIS)

AIS is specifically designed to meet the needs of universities that want computerized educational services to improve performance, service quality, competitiveness and quality of human resources it generates. AIS is helpful in the management of data on the students' scores, courses, faculty data, and administrative faculties/departments which are still to be done manually with the help of software to be able to streamline time and lower operational costs. AIS has also been adapted to the needs of universities including the preparation of reports EPSBED (Program Evaluation Based on Self-Evaluation Study) submitted to the Directorate of each semester automatically.

METHODOLOGY AND RESEARCH

The research design used was descriptive. All data were collected directly through the use of questionnaire. Likert scale was used as follows: 1-strongly disagree, 2-disagree, 3-agree, and 4-strongly agree. The sample consists of 200 students taken through purposive sampling techniques from four universities in Surabaya, namely: Institut Teknnologi Ten November/ITS, University of Ciputra, STIKOM, and STIE Perbanas Surabaya. These four colleges have implemented e-learning and information systems, and internet-based learning. The study includes the students' perceptions about the ease of using e-learning, academic information systems, the benefits of using e-learning, and their social influence in using e-learning.

RESULT AND ANALYSIS

Students' Perceptions on Ease of Using E-learning. Students' responses to the ease of use of e-learning are as shown in Table 1. It can be noted that on athe verage, the students claimed to agree with the statements in the questionnaires. The students stated that by using e-learning, they feel that it is easy to operate it with an average score of 3.07; the e-learning is easy to learn with an average score of 3.07; and through e-learning, it is easier to obtain the desired information with an average score of 3.14. In general, the students from four colleges in Surabaya agreed with the statements in the questionnaires. This is shown by the average score of 3.09 which means that using e-learning, they feel easy to operate it, easy to learn, and easy to obtain the desired information.

Table 1
Perceptions of Respondents to the Ease on Using E-learning

No.	Information	Score
1	Easy to operate	3.07
2	Easy to learn	3.07
3	Easy to get the information	3.14
	Average Score	3.09

Student Perceptions of Ease of Use of Academic Information Systems
Table 2 indicates that, on average, the students agree with the statements in the questionnaires. This is shown by the average score given by the students. The students claimed that academic information systems is easy to operate, with an average score of 3.15. AIS is also easy to learn with an average score of 3.09, and with the existing academic information system, they feel easy to obtain the desired information with an average score of 3.13. In general, the students from four colleges in Surabaya agreed with the statements in the questionnaires. This is shown by the average score of 3.13 which means that the students find academic information system easy to operate, and easy to learn, easy to obtain the desired information.

Perception of Students About the Benefits of Using E-learning
Table 3 shows that on average, students agreed with the statements in the questionnaires. The students said e-learning courses can help complete tasks more quickly with an average score of 3.03; the e-learning can minimize the time because it does not need to wait for the next class schedule with an average score of 2.98; e-learning gives ideas and inspiration in completing the coursework with an average score of 2.95; and e-learning provides opportunities to students to obtain materials or college assignment earlier with an average score of 3.1. In summary, students from four colleges in Surabaya agreed with the statements in the questionnaires about the benefits of using e-learning. This is reflected in the average score of 3.02 which means the students said that using e-learining, tasks are completing more quickly, lecture materials are better to understood, it enhances time efficiency because they do not need to wait for the next class schedule; provide ideas and inspiration in completing the coursework; and provide more opportunities for the students to obtain materials or assignments early.

Student Perceptions of Social Influence in Using E-learning
Table 4 indicates that, on the average, students agreed with the statements in the questionnaires. This is shown by the average score given by the students. Students said that e-learning can gain added value with an average score of 2.78; e-learning has changed the lifestyle in the process of learning with an average score of 2.27; e-learning has created pride in the social relationships between students with an average score of 2.72; and e-learning has created a desire to recommend it to others with an average score of 3. Overall, students from four colleges in Surabaya agreed with the statements in the questionnaire about the social effects of using e-learning. This is shown by the average score of 2.88 which means that the students

can gain added value using e-learning; e-learning has changed their lifestyle in the process; e-learning has created pride in the social relationships between students; and use of e-learning experience has led to a desire to recommend it to others.

Table 2
Respondents' Perception of Ease on Using AIS

No.	Information	Score
1	Easy to operate	3.15
2	Easy to learn	3.09
3	Easy to get the information	3.15
	Average Score	3.13

Table 3
Perception of Students About the Benefits of Using E-learning

No.	Information	Score
1	Can help to complete tasks more quickly	3.03
2	Can help to understand or better understand the lecture material	3.03
3	Can minimize the time because they do not need to wait for the next class schedule	2.98
4	Giving ideas and inspiration in completing assignments	2.95
5	The existence of e-learning provides opportunities to students to obtain materials or assignments early	3.10
	Average Score	3.02

Table 4
Students' Perceptions of Social Influence in Using E-learning

No.	Information	Score
1	Using e-learning can gain added value	2.78
2	e-learning has changed the lifestyle in the learning process	2.27
3	e-learning has created pride in the social relationships between students	2.72
4	Experience the use of e-learning has created a desire to recommend it to others	3.00
	Average Score	2.88

IMPLICATION AND CONCLUSION

Based on the results, it is known that students have positive perceptions towards the implementation of e-learning and information systems, internet-based academic. The students get some benefits from the implementation of the technology-based learning process. Therefore, it is especially important for the colleges that have not applied the learning based on the information system to develop IT-based learning and AIS.

With the use of IT in the learning process (e-learning) and AIS with internet-based, the students are expected to obtain the desired information. They are also expected to have been assisted in completing their tasks more quickly; understanding and exploring the materials; minimizing the time by spending shorter time for the next class schedule; completing the coursework; and providing them more

opportunities to obtain the materials or assignments earlier. It provides added value for students and changes their lifestyle by using the learning process and generates their pride in the social relationships with others. Finally, the experience of using e-learning has created a desire for the students to recommend others of using e-learning process.

REFERENCES

Cisco. (2001). E-learning: Combines communication, education, information, and training.

Djamarah, S. A. (2002). Strategi Belajar Mengajar. Rineka Cipta, Jakarta.

Hamalik, O. (1986). Media Pendidikan. Penerbit Alumni, Bandung.

Jogiyanto. (2007). Sistim Informasi Keprilakuan, Penerbit Andi Yogyakarta.

Kotler, P. & Armstrong, G. (2008). Principle of Marketing (12th ed.). USA: Prentice Hall.

Oetomo, B. S. D., & dan Priyogutomo, J. (2004). Kajian Terhadap model e-media dalam Pembangunan sistem e-Education, Makalah Seminar Nasional Informatika di Universitas Achmad Dahlan Yogyakarta.

Purbo, A. W. (2002). E-Learning berbasis PHP dan MySQL. Penerbit Elex Media Komputindo, Jakarta.

Robbin, P. S. (2009). Organizational Behavior (13th ed.). USA: Prenhall.

Salomon, M. R. (1996). Consumer Behavior. USA: Prentice-Hall International.

Soekartawati. (2003). E-learning di Indonesia dan prospeknya di masa mendatang, Makalah Seminar Nasional e-learning perlu e-library di Universitas Petra Surabaya.

Syah, M. (2002). Psikologi Pendidikan dengan Pendekatan Baru. Rosda Karya, Bandung.

http://sistem-informasi.instablogs.com/entry/sistem-informasi-akademik/ download 14 Juli, 2010

http://www.ilmupendidikan.net/2010/03/21/layanan-pembelajaran-berbasis-e-learning.php download 18 Juni 2010.

SEAAIR
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De La Salle University
DASMARIÑAS

EVALUATING E-LEARNING IN ACCOUNTING DEPARTMENT AND EFFECTS ON STUDENTS' PERFORMANCE

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ABSTRACT

E-learning has been widely used for teaching and learning activities. The objective of this study was to analyze the effect of utilization of information technology (e-learning) on students' performance. This research also explores the subjects of accounting which are presented by fact, the most popular ones in acounting department because these subjects are presenred by mean of learning. The utilization of information technology is viewed in terms of six factors: social, affective, complexity, task technology fitness, long-term consequences, and the conditions that facilitate it. The students' performance is measured by two measurements: grade point ratio (GPR) and the five-point scale performance was used. This research also explored on the students' performance and utilization of information technology based on gender, intensity of using system, and the student performance insex group. The respondents were the students in the accounting department. Regression analysis was used to test the hypotheses.

The result shows that the utilization of information technology affects the students' performance, particularly in social factors. Accounting information system was the subject that has the highest score in the selection of the most popular subjects. The result was expected to improve the quality of e-learning in accounting department and develop more these interesting subjects using e-learning.

Keywords: E-learning, student performance, IT utilization

INTRODUCTION

The development of information technology (IT) has penetrated education today. Many institutions have already adopted the use of Information Technology (UIT) (e.g., computers) to improve the performance college students, faculty, and staff. STIE Perbanas Surabaya (a College of Economics) has been using IT to improve students' performance. The success of this program is identified by the achievement of the college to get grants from the Directorate General of Higher Education (DGHE). For instance, a grant in 2007 aimed to improve IT awareness. By this grant, STIE Perbanas Surabaya tries to improve the performance of both the students and lecturers. The goal focuses on improving the teaching and learning processes through teaching methods and materials development using UIT. The college also aims to increase accounting students' awareness on the development of UIT, the UIT-based instructional media, and e-learning system. By achieving such objectives, it is expected that the students' learning achievement can also be improved Without the skill of computer operation, individuals will feel anxious and, therefore, this condition affects their learning achievement. Besides that, different characteristics of individuals in the classroom can also affect such learning achievement.

This research used several undergraduate students majoring in accounting in SY 2008-2009 at STIE Perbanas Surabaya (college of economics) who had experienced UIT and the impact on the performance of learning. The problem raised is whether the IT such as e-learning and the computer assisted learning affect the students learning performance. In other words, this study aimed to investigate the effect of the UIT on individual performance and their grade point average (GPA). This research is an evaluation of development programs in the accounting department which is funded by Dikti (*Direktorat Jenderal Pendidikan Tinggi*/Directorate General of Higher Education/DGHI). The program is namely information technology awareness. One of manifestations is the development of e-learning. This research is not intended to reveal the difference between the condition and students' performance before and after the implementation of e-learning program, but it focused more on whether the program is beneficial and to reveal which subjects (course) are the most interesting ones in the accounting department.

THEORETICAL FRAMEWORK

Jin, Tjhai Fung (2003) described the factors that influence the use of personal computers toward the learning performance. First of all, social factors are internalization of subjective culture groups and specific interpersonal agreements made with other individuals, in certain social situations. Subjective culture contains norms (norms), the role (roles), and values (value) which indicates a positive relationship between social factors and UIT. Secondly, it concerns the affection or the feeling of an individual of the work: whether pleasant or unpleasant, like or dislike of UIT. Theoretically, it separates the cognitive components from emotional components in terms of measurement. Both of these components should be treated in the same construct but to distinguish these two components, we must do it by proposing the affection which influences the UIT.

The third is a complexity. The more complex the innovation is, the lower the level of the acceptance. Thus, if the UIT can be demonstrated in the context of acceptance of innovation, it has negative relationship between complexities and the UIT. The fourth is sustainability of the task measured by whether individuals believe that the UIT will improve the performance of the individual. In that case, positive relationship between job fitness and the UIT has been proven from several research results. The fifth is the long-term consequences measured by the output of whether they have future benefits, such as the increased flexibility in changing jobs or the increased opportunities for better jobs. The seventh is the conditions that facilitate the UIT that include objective factors beyond the environment that facilitates the use of doing a job. In the context of the UIT, facilitating condition is one of the factors influencing the UIT.

DeLone and McLean (1992), both the use and the attitudes of the users of the technology will affect the performance of individuals with the factor explaining the technology tasks. This describes how IT influences the individual performance. The implementation is done by accuracy and suiting to the tasks that support them. Thompson et al. (1999) stated that attitudes and beliefs can predict that the user can use the information system by UIT. The user's attitudes and other factors affect the willingness of using the system and they are directly related to greater utilization. Higher UIT will have a positive impact on individual performance.

Jin, Tjhai Fung (2003)'s study also showed that there is a positive and significant relationship between social factor and UIT but the affection does not have a significant relationship with the UIT. Handayani (2007)' study also proved that the performance expectations of the business and social factors have significant and positive influence toward the intention of information system. Christianto et al. (2007) research also showed that the implementation of IT affects the company's operational performance. Human Resource Department (HRD) of STIE Perbanas Surabaya's (2008) study described the factors

that influence the UIT on the employees' performance. It shows that the employees' performance at STIE Perbanas Surabaya is influenced by the conditions that facilitate them. Based on the previous studies, the framework of the research can be shown as in Figure 1.

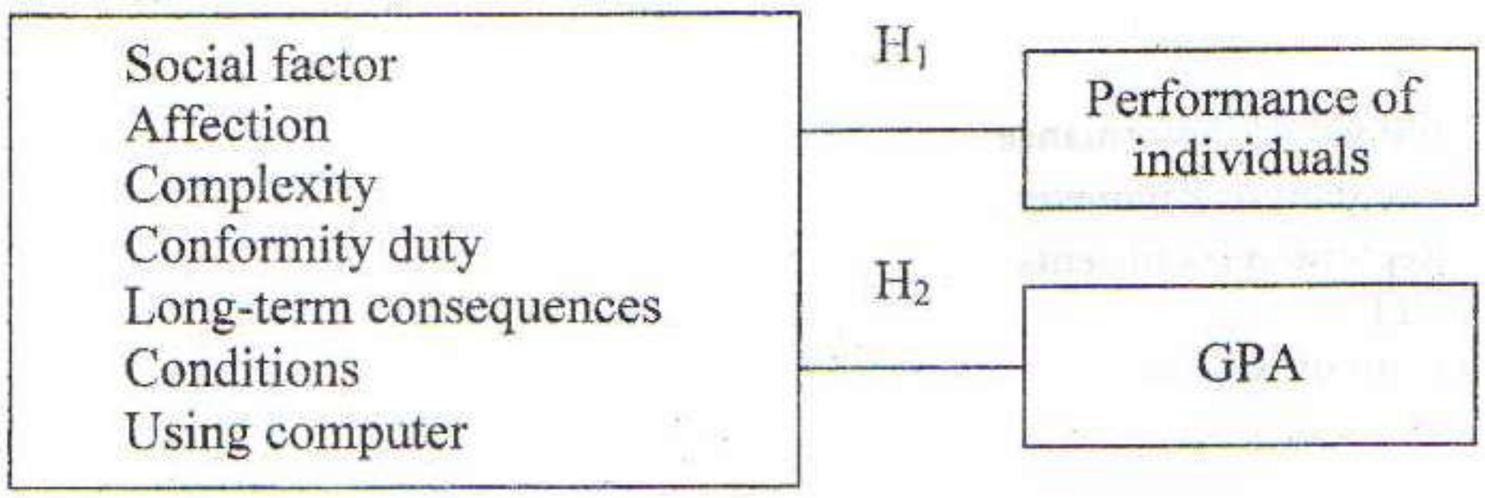


*Figure 1.*Theoretical framework

The hypotheses are as follows: first, there is an influence of IT (social factors, affection, complexity, conformity duty, long-term consequences, and conditions which facilitate the use of computers) on the performance of individuals. Secondly, there is an influence of IT (social factors, affection, complexity, conformity duty, long-term consequences, and conditions which facilitates the use of a computer) on the students' GPA.

RESEARCH METHOD

The UIT consists of social factors, affection, complexity, conformity tasks, long-term consequences, and conditions that facilitate the use of computers, as the independent variables while the individual performance and the performance of students are the dependent variables. UIT (social factors) is the individual's internalization of cultural reference group in agreement between the subjective and personal factors in specific social situations. Subjective culture concerns the norms, the roles, and values. UIT (affection) is a feeling of joy, elation, joy or depression, disgust, disapproval and dislike of certain individuals associated with the UIT. The UIT (Complexity) is the rate of innovation perceived as relatively difficult to understand and use.

The UIT (conformity tasks) is tasks associated with the extent to which individual are able to use IT to improve their performance in executing the task. The UIT (consequence long term) is related to the individual's future, such increasing flexibility, changing jobs, or increasing employment opportunities meaningfully. UIT (computer usage facilitating conditions) is the objective practiced outside the environmental factors that facilitate the user to act or work. The use of IT supports the users. This concerns one of conditions that facilitate and affect the UIT. The analysis is done by using four levels of score as the follows: Strongly Disagree (STS), 1; Disagree (TS), 2; Agree (S), 3; Strongly Agree (SS), 4. The respondents are the students majoring in accounting (2006-2009) at STIE Perbanas Surabaya, taken by means of purposive sampling technique.

The Kolmogorov Smirnov test was implemented. If the significance is below .05, it means that data tested have significant differences compared with the standard normal data. In this, the data are not normal. When it is above 0.05, there is no significant difference between the data tested and standard normal data. Regression analysis is used to define a mathematical relationship between the dependent variable (Y) and

one or several independent variables (X). Systematic relationship is used as a regression model to forecast or predict the value of output (Y) based on input values (X) specific. Thus, the analysis is shown in the following.

$$Y = \alpha+\beta X+ e$$

Where:

Y	=	Individual Performance
α	=	Constant or Parameter
β	=	Regression coefficients
X	=	UIT
e	=	Error or Residue

RESULTS AND DISCUSSION

Of the 123 respondents, 61 (49.6%) were students in 2006, 27 (22%) where from 2009 students, 18 (14.6%) were from 2007, while 17 (13.8%) were from 2008 students. Most of them are female (75.6%) while the male respondents are comprised of 24.4 percent.

The intensity of the UIT 1 to 2 hours per day availed by 67 students (54.5%) the lowest intensity was less than one hour per day reported by four students (3.3%). The frequency of UIT in a week was 4 to 6 times, reported 48 percent of the respondents, while the lowest frequency was 80 to10 times per week (8.9%). About 89.4 percent used E-learning while only four (0.8%) used the video stream. These respondents with GPA ranging from 0.00 to 0.99 accounted to 1.6 percent, CPI respondents ranged from 1.00 to 1.99 that is one respondent or 0.8 percent, CPI respondents ranged from 2.00 - 2.99, of 28 respondents (22.8%), CPI respondents ranges from 3.00 to 3.99, which is 92 respondents (74.8%).

Five courses use IT, such as (1) the accounting information system, 47 respondents. They argue that they get knowledge and materials in E-learning which is accessible and easy to understand; (2) Management Information System, 41 respondents, the reason is that they get management information systems, which is accessible and easy to get materials; (3) Computer Application, 29 respondents, the reason is that the can get direct practice on Ms. Office; (4) Introduction to Accounting I, 23 respondents, the reason is that they get better basic understanding of accounting; (5) Management Control Systems, 20 respondents, the reason is that it is more interesting and easy to understand the materials.

Table 1
Five Most Preferred Courses in UIT

No	Course	Percentage
1	Accounting Information Systems	30
2	Management Information Systems	26
3	Computer Application	18
4	Accounting Intermediate	14
5	Management Control Systems	12

UIT Identification Based on Characteristics

First, the mean of UIT is 3.18: the students of 2006 and 2008 with the mean of 3.21. The smallest mean is those of 2007 that is 3.10. Second, UIT based on the gender of the respondents, the mean is obtained totally of 3.18. Mostly, the mean is 3.19. The smallest mean is male respondents of 3.17. Third, UIT

based on the total GPA of respondents with the mean of 3.18. Mostly, the mean is 1.00 to 1.99 which is of 3.35. The smallest mean is between 0.00 and 0.99 which is 2.96. Fourth, using information technology based on the intensity of the use of IT (computer & internet) with the mean of 3.18. Mostly, the mean is 3.34 (one hour a day). The smallest mean is 3.18 (hours a day). Fifth, using information technology based on the frequency of UIT (computer & internet) with the mean of 3.18. Mostly, the mean is 90-10 times a week that is 3.25. The smallest mean is 3.14 (hours in a week). Sixth, UIT based on the type of IT (Computer & Internet) with the mean of 3.18. Mostly, the mean is 3.20. The smallest mean is an E-mail that is 3.08.

UIT (Social Factors) Based on the Characteristics of Respondents

First, the UIT (social factors), totally, the mean is 3.35; mostly the mean of 2008 students is 3.44. The smallest mean is those of 2009 that is 3.20. Second, UIT (social factor) based on gender the total mean is of 3.35. Mostly, the mean is male that is 3.38. The smallest mean is female (3.33). Third, UIT (social factor) the mean is 3.35. Mostly, the mean is between 3.00 to 3.99 which is 3.42. The smallest mean is between 1.00 and 1.99, which is 2.50. Fourth, UIT (social factor) based on the intensity of UIT with the total mean is 3.35. Mostly, the mean value is less than one hour a day that is 3.43. The smallest mean is more than four hours in a day that is 3.33. Fifth, UIT (social factor) by Frequency of UIT obtained a total mean of 3.35. Mostly, the mean is 7-8 times a week (3.49). The smallest mean is 3.23 (1-3 times a week). Sixth, UIT (social factor) based on the type of IT (Computer & Internet) obtained the mean of 3.35. Mostly, the mean is E-learning (3.36). The smallest mean is using a blog (3.20).

UIT (Affection) Based on Respondents Characteristics

First, UIT (Affection) based in the total force with the mean of 3.35. Mostly, the mean is those of 2008 (3.47). The smallest mean is those of 2007 and 2009 (3.30). Second, UIT (Affection) based on gender the total mean is 3.35. Mostly, the mean of the male is (3.40). The smallest mean is of female (3.33). Third, UIT (Affection) based on the total value of the mean GPA is3.35. Mostly, the mean of 1.00 and 1.99 is 3.67. The smallest mean is between 2.00 and 2.99 (3.08). Fourth, UIT (Affection) based on the intensity of IT usage with the total mean of 3.35. Mostly, the mean is less than one hour a day that is 3.44. The smallest mean is more than four hours in a day that is 3.32. Fifth, UIT (Affection) by Frequency of UIT with the total mean of 3.35. Mostly, the mean is 3.49 (7-8 times a week). The smallest mean is 3.23 (1-3 times a week). Sixth, UIT (Affection) based on the type of IT (Computer & Internet) with the mean of 3.35. Mostly, the mean is the Video Stream (4.00). The smallest mean is of E-mail (3.21).

UIT (Complexity) Based on the Characteristics of Respondents

First, UIT (complexity) based in the total force obtained the mean of 3.29. Mostly, the mean is those of 2006 (3.40). The smallest mean is those of 2008 and 2009 (3.16). Second, UIT (complexity) based on gender with the mean of 3.29. Mostly, the mean is of female (3.30). The smallest mean is of male (3.28). Third, UIT (complexity) based on the total value is 3.29. Mostly, the mean is between 3.00 and 3.99, that is 3.39. The smallest mean is between 1.00 and 1.99 (2.50). Fourth, exploiting IT (complexity) based on the intensity of the use of IT (Computer & Internet) with the mean of 3.29. Mostly, the mean is 3.29 (less than one hour a day). The smallest mean is 3.20 (1-4 hours in a day). Fifth, UIT (complexity) based on the Frequency of UIT (Computer & Internet) obtained the mean of 3.29. Mostly, the mean is 3.61 (9-10 times a week). The smallest mean is 3.20 (1-3 times a week). Sixth, UIT (complexity) based on the Types of IT (Computer & Internet) with the mean of 3.29. Mostly, the mean is of an e-mail that is 3.40. The smallest mean of a streaming video is 3.00

UIT (Conformity Tasks) Viewed on the Basis of Several Characteristics of the Respondents

First, UIT (Conformity Tasks) based in the total force the mean is .05. Mostly, the mean is 3.10. The smallest mean is those of 2007 (3.00). Second, UIT (Conformity Tasks) based on gender the mean is 3.05. Mostly, the mean of male is 3.07. The smallest mean of female is (3.05). Third, UIT (Conformity Tasks) the mean is 3.05. Mostly the mean is between 1.00 and 1.99 which is 3.67. The smallest mean is

between 2.00 and 2.99, which is 2.94. Fourth, UIT (Conformity Tasks) based on the intensity of the use of IT (Computer & Internet) the mean is 3.05. Mostly, the mean is more than 4 hours in a day (3.16). The smallest mean is less than one hour in the day that is 2.92. Fifth, UIT (Computer & Internet) the mean is 3.05. Mostly, the mean is 3.24 (90-10 times in a week). The smallest mean is 2.96 (7-8 times a week). Sixth, exploiting IT (Conformity Tasks) based on the type of IT (Computer & Internet) the mean is 3.05. Mostly, the mean is of a streaming video that is (3.27). The smallest mean is the e-mail that is 3.00.

UIT (Long Term Consequences) Based on the Characteristics of Respondents

First, UIT (Long Term Consequences) based in the total force the mean is 3.20. Mostly, is those of 2006 (3.24). The smallest mean is those of 2007 (3.15). Second, IT (Long Term Consequences) by gender the mean is 3.20. Mostly, the mean of male is 3.22. The smallest mean is of female (3.20). Third, exploiting IT (Long Term Consequences) based on the total value of the mean of GPA is of 3.20. Mostly, the mean is between 1.00 and 1.99 which is 4.00. The smallest mean is between 0.00 and 0.99 which is 3.17. Fourth, UIT (Long Term Consequences) by the intensity of the use of IT (Computer & Internet) the mean is 3.20. Mostly, the mean is 3.26 (more than four hours in a day). The smallest mean is 3.19 (less than 2-3 hours a day). Fifth, UIT (Long Term Consequences) by Frequency of UIT (Computer & Internet) the mean is 3.20. Mostly, the mean is 33 (90-10 times in a week). The smallest mean is 3.18 (7-8 times a week) Sixth, UIT (Long Term Consequences) by type of IT (Computer & Internet) the mean is 3.20. Mostly, the mean is of a streaming video and blog that is 3.27. The smallest mean is of E-mail (3.10).

1. ***UIT (Facilitating Conditions) based on the characteristics of respondents.*** First, UIT (Facilitating Conditions) obtained the mean of 2.84. Mostly, the mean is those of 2009 that is 3.01. The smallest mean is those of 2007 that is 3.67. Second, UIT (Facilitating Conditions) based on gender the mean is 2.84. Mostly, the mean of female is 3.00. The smallest mean of male is 2.66. Third, UIT (Facilitating Conditions) based on the mean of GPA is 2.84. Mostly, the mean is between 1.00 and 1.99 which is 3.75. The smallest mean is between 0.00 and 0.99 which is 2.25. Fourth, UIT (Facilitating Conditions) based on the intensity of the use of IT (Computer & Internet) with the mean of 2.84. Mostly, the mean is less than one hour a day that is 3.25. The smallest mean is 2.72 (2-3 times a day). Fifth, UIT (Facilitating Conditions) by Frequency of UIT (Computer & Internet) obtained the mean of 2.84. Mostly, the mean is 2.91 (4-6 times a week). The smallest mean is 2.60 (90-10 times in a week). Sixth, UIT (Facilitating Conditions) based on the Types of IT (Computer & Internet) with the mean of 2.84. Mostly, the mean of E-learning is 2.86. The smallest mean of a streaming video is 2.00.

2. ***Individual performance seen by the characteristics of respondents.*** First, based on individual performance, the mean is 3.27. Mostly, the mean of those of 2006 is 3.36. The smallest mean of those of 2009 is 3.19. Second, the performance of individuals based on gender the mean is 3.27. Mostly, the mean of male is 3.30. The smallest mean of female is 3.27. Third, based on individual performance the mean is 3.27. Mostly, based on GPA is the mean is between 1.00 and 1.99 that is 4.00. The smallest mean based on GPA is between 0.00 and 0.99 that is 3.31. Fourth, based on Intensity of UIT (Computer & Internet), the mean is 3.27. Mostly, the mean is less than one hour a day a day that is 3.38. The smallest mean is 1-3 times a day that is 3.24. Fifth, the performance of individuals based on the Frequency of UIT (Computer & Internet) with the mean of 3.27. Mostly, the mean is 90-10 times in a week that is 3.41. The smallest mean is 7-8 times a week that is 3.21. Sixth, the performance of individuals on the basis of IT (Computer & Internet) is with the mean of 3.27. Mostly, the mean of a blog is 3.45. The smallest mean of a streaming video is 2.88.

Simultaneous Test F

It shows that the calculated F value is 114.292 with the probability of 0.000 (much smaller than 0.05), the regression can be used to predict that UIT affects individual performance.

Simultaneous significance test of each variable (Social Factors, Affection, complexity, suitability of Duty, Long-term consequences, Facilitating Conditions) is as follows. It shows that the calculated F value is 24 368 with probability .000 (much smaller than 0.05). Thus, the regression can be used to predict that the variables (Social Factors, Affection, Complexity, Conformity Task, Long-Term Consequences, and Facilitating Conditions) jointly influence the Individual Performance.

Significance Test of Individual Parameters (Test Statistic t)

The influence of UIT on individual performance is as the following. It shows that the value of the UIT is equal to 0.923 with t-value of 10.691. Therefore, the probability of t (sig. t) is 0.000 (much smaller than 0.05). The value for the social factor (FS) is equal to 0.132 with a t value of 1.655. Therefore, the probability of t (sig. t) is 0.101, suggests that the significance value greater than 0.05. It proves that social factors negatively and not significantly influence individual performance. Value for affection is equal to -0.020 with a t value of -0.265. Therefore, the probability of t (sig. t) is .792, suggests that the value is far greater significance than 0.05. Thus, the affection does not significantly and negatively correlate with individual performance. The value for complexity (Computer) is equal to 0.207 with a t value of 3.701. Therefore, the probability of t (sig. t) is 0.000, this shows that the value is far below the 0.05 significance. Thus, the complexity (Computer) correlated positively and significantly with individual performance. The value for conformity tasks (KT) is equal to 0.087 with a t value of 0.887. Therefore, the probability of t (sig. t) is 0.377, this suggests that the significance value is greater than 0.05. Thus, the suitability of the task (KT) does not significantly and negatively correlate with individual performance. The value for the long-term consequences (KJP) that is equal to 0.476 with a t-value of 5.091. Therefore, the probability of t (sig. t) is 0.000, this shows that the value is far below the 0.05 significance. Thus, the long-term consequences (KJP) correlated positively and significantly with individual performance. Values for the conditions that facilitate (KYM) that is equal to 0.037 with t value of 0.715. Therefore, the probability of t (sig. t) is 0.476, this suggests that the significance value greater than 0.05. Thus, the conditions that facilitate (KYM) do not significantly and negatively correlate with individual performance.

The influence of UIT on GPA is as follows. It shows that the value for the use of IT is equal to 0.368 with a t value of 2.226. Therefore, the probability of *t* (sig. t) is 0.028, this suggests that the significance value is smaller than 0.05. The value for the social factor (FS) is equal to 0.497 with a t value of 3.203. Therefore, the probability of t (sig. t) is 0.002, this suggests that the significance value is smaller than 0.05. It proves that social factors have a positive and significant effect on GPA. The value of affection is equal to 0.015 with a t value of -0.106. Therefore, the probability of t (sig. t) is 0.916, this shows that the significance value is greater than 0.05., proving that affection does not significantly and negatively correlated with GPA. The value for complexity (Computer) is equal to 0.176 with a t value of 1.613. So, the probability of t (sig. t) is 0.109, this suggests that the significance value is far greater than .05, proving that the complexity (Computer) correlated negatively and significantly with GPA. The value for conformity tasks (KT) is equal to 0.120 with a t-value of 0.632. Therefore, the probability of t (sig. t) is 0.529, this suggests that the significance value greater than 0.05, proving that the suitability of the task (KT) does not significantly and negatively correlated with GPA. The value for the long-term consequences (KJP) is equal to -0.270 with a t value of -1.482. Therefore, the probability of t (sig. t) is 0.141, showing that the significance value is greater than 0.05, proving that the long-term consequences (KJP) does not significantly and negatively correlated with GPA. The value of facilitating condition (KYM) is equal to -0.071 with a t-value of -0.691. Therefore, the probability of t (sig. t) is -0.691, this suggests that the significance value is greater than 0.05, thus proving that the conditions that facilitate (KYM) do not significantly and negatively correlate with GPA.

CONCLUSION

It can be concluded that the independent variable of UIT (Social Factors, Affect, Complexity, Conformity Task, Long-Term Consequences, Facilitating Conditions) have a significant impact on individual performance. The UIT when treated using a regression, the variables supporting the UIT shows that two variables: the complexity and long-term consequences strongly support the UIT has impact on individual performance, while the other four variables: social factors, affection, job fitness and the conditions do not support the hypothesis that the UIT has impact on the formation of individual performance. UIT in this college is still considered beneficial and there are five subjects or courses in accounting department that are the most interesting. These five subjects are Information system of accounting, information system of management, computer application, introduction to accounting, and controlling system of management.

Since the respondents are the students of 2006 to 2009. However, the total number taken in this research for the respondents is only 123 respondents. It seems that this study may entail some weaknesses. Thus, further research involving bigger number and covering other universities can be done to get much more generalizable. The *R* Square of explanatory variables used in information technology to individual performance is 48.6 percent, meaning that the variable of the use of information technology is able to explain the individual performance that is of 48.6 percent. *R* square of 55.8 percent is explained by the variables that support the hypothesis that there is an impact of UIT on individual performance.

REFERENCES

Christianto, H. (2007). The effect of implementation of information systems on operational performance: A case study bike delivery service company. *Journal of Information Systems, MTI UI 3*(2).

Ghozali, I. (2006). *Application of multivariate analysis using SPSS*. Diponegoro University Publishing, Semarang.

Ghozali, I. (2006). *Non-parametric statistical theory and applications with SPSS software*. Diponegoro, University Publishing, Semarang.

Handayani, R. (2007). Analysis of factors affecting the use of interest in use of information system. *Journal of Accounting and Finance*, 9(2), 76-87.

Hariningsih, S. P. (2005). *Information Technology*. Yogyakarta Graha Science.

Jin, T. F. (2003). Analysis of factors affecting utilization of information technology and influence on the performance of public accountants. *Journal of Business and Accounting, 5*(1).

Pribadi, Y. S. (2008). *Factors affecting utilization of information technology and the influence of utilization of information technology toward employee performance*. Unpublished thesis, Perbanas.

Sutarib, T. (2004). *Accounting Information Systems*. Andi Yogyakarta

Yamin, S. & Kurniawan, H. (2009). *Statistical analysis techniques*. Jakarta: Salemba Infotek Publishing, First Series.

CAPACITY DEVELOPMENT ON COMPUTER TECHNOLOGY FOR PUBLIC SECONDARY SCHOOL TEACHERS IN THE ISLAND OF MINDANAO, PHILIPPINES: THE CASE OF BUKIDNON STATE UNIVERSITY

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ABSTRACT

This paper aims at capacitating the public secondary school teachers in the province of Bukidnon, Mindanao on the utilization of computer technology for classroom instructions. It also describes and presents experiences in developing the ability of these teachers on computer internet literacy and on handling PC recycling problems in their respective schools. This is necessary to effectively minimize the digital divide among the secondary school teachers. The computer literacy of teachers is enhanced by providing them with computer skills, facilitating knowledge and helping them develop their computer skills. The capacity development projects include training of public secondary school teachers, which provides them with Free Open Source Software (FOSS). Collaborative efforts among institutions were done to ensure meaningful, life-long and maximum implementation of the iSchools Project. A total of 1,248 public secondary school teachers were trained on computer technology. The training of secondary school teachers on Computer Technology and proper monitoring are shared responsibilities of Bukidnon State University, Department of Education and Local Government Units. This could be one of the best solutions in addressing the digital divide in promoting meaningful and lifelong learning for both teachers and students.

Keywords: Capacity development, computer internet literacy training, PC recycling, computer technology, and lifelong learning

INTRODUCTION

Computer Technology (CT) is wanting in many public secondary schools in the island of Mindanao, particularly in the province of Bukidnon. In fact, everyone looks forward to the realization of the Medium-Term Development Plan of the Philippines (MTPDP), which indicated that by 2010, 100 percent of public secondary schools shall have computers. This was made possible through the joint efforts of the government, the school officials, and the private partners. Teachers will utilize these computers in the classrooms; hence, every teacher is expected to be computer literate.

Many secondary school teachers in Bukidnon have not been exposed to utilizing computers in their schools. Despite the fact that computer technology offers boundless global access and borderless information to educators, many teachers lack the knowledge and skills in preparing the learners for technology-ruled world in education. Nonetheless, everyone is aware that computer gives new strategies in teaching and utilizes communication as a tool in teaching and learning. It reinforces the existing instructional methods and strategies used in education. Furthermore, it enriches basic knowledge,

develops more critical thinking skills, enhances collaborative learning and promotes information-sharing among the learners.

The State Universities and Colleges (SUCs) offering Information Technology courses have to work collaboratively in capacitating and developing public secondary school teachers on computer recycling. Bukidnon State University (BukSu), being a partner of the Commission of Information and Communication Technology (CICT) is taking a lead in capacitating the public secondary school teachers with the knowledge and skills to become active and lifelong learners in a technologically sound environment. Computer Technology is undergoing rapid change where new and improved advances appear almost daily. The curriculum is designed to form the foundation for continued learning applicable to ever-changing innovations (Tinio, 2002).

BukSu is privileged to work with the CICT, the former being a leading educational institution in ICT in the region. Being tapped as an implementing institution of the government's project, it has established its partnership with CICT in the implementation of its educational projects. Based on this partnership, BukSu is one of the implementers of "*i*Schools Project", a flagship project of CICT. Both CICT and BukSu recognize the urgent need to bring information technology to the countryside in order to reduce if not eliminate digital divide. These bring about effective training on the up-to-date and appropriate information and communications technology which can be best achieved through synergistic cooperation.

The training of secondary school teachers on ICT is one of the best solutions in addressing the digital divide gap in the province (Itaas, 2009). Education cannot be globally competitive and enhanced without the integration of ICT in the curriulum. This is a universal norm now and even prescribed by UNESCO (Lapus, 2008). The strategic plan will include activities, such as complete integration of ICT into the curriculum; intensifying competency-based professional development programmes; the establishment of necessary ICT infrastructure, and the development of processes systems for governance and management.

This paper presents the issues on computer trainings for the public secondary school teachers. It also describes the training needs on computer technology of these teachers. It highlights some practices of BukSu as a leading institution on CICT towards global competitiveness. The present state of the university on nurturing and promoting ICT in the province through training workshops is described. Challenges and lessons learned being gathered from the trainers and trainees are presented.

Issues

The views of public secondary school teachers on the paradigm shift from traditional to transformational or technological curriculum is promising. The school administrators, together with the government, have to support the implementation of innovative techniques using computers in the classroom. Training the secondary school teachers on computer technology, specifically from computer literacy training to Personal Computer (PC) recycling, equips and enhances their motivation to learn and prepares them to face secondary education globally. Teachers are the instruments in improving and enhancing the quality of education. This is done by increasing learner's motivation and engagement by acquiring basic knowledge and skills, and by enhancing teaching-learning processes. CT when used appropriately can promote the shift from teacher-centered to a learner-centered environment. Learning by doing provides a life-long learning which increases basic knowledge and skills of teachers.

Training

BukSu, together with the Department of Education (DepEd), established partnership in the implementation of iSchools Project in the Secondary Schools. This is indicative that both are cognizant of the growing need of computer technology in the Philippines. Both recognize the urgent need to develop

CT knowledge and skills among the secondary school teachers and to integrate CT in the curriculum by maximizing the use of the computer technology in teaching and learning.

As a teacher training institution, BukSu in collaboration with the CICT has implemented the *i*Schools project since 2007 to date. Secondary school teachers in Bukidnon were trained on computer literacy, laboratory management and web designing. This year, the training focused on recycling the computers. Computer recycling is the recycling or reuse of computers after having been repaired and found to be already functional. It includes both finding another use for materials (such as donation to charity) and having systems dismantled that allows for the safe extraction of the constituent materials for reuse in other products. It has been observed that some computers in the public secondary schools are already malfunctioning. For these computers to be recycled, the teachers need to be trained to troubleshoot these computers.

The training follows the Seal's and Glasgow's (1998) ADDIE model. This was modified to capture the actual conduct of the training, adding the learning gains of both the trainees and trainer's benefits. The ADDIE is an acronym for Analysis, Design, Development, Implementation, and Evaluation. Analysis is the initial information gathering activities which assesses the what, who, how, and why of the instructional activity. Design is making the objectives and desired outcomes of the instructional activity as well as the overall plan, such as timelines, strategies, lesson plans, and so on. Development is the actual making of the instructional materials including instructor guides. Implementation is putting the plan and the instructional materials into action such as completing and offering a computer-based instructional module. Evaluation is the checking for the effectiveness of the instructional program, both immediately and in the long run.

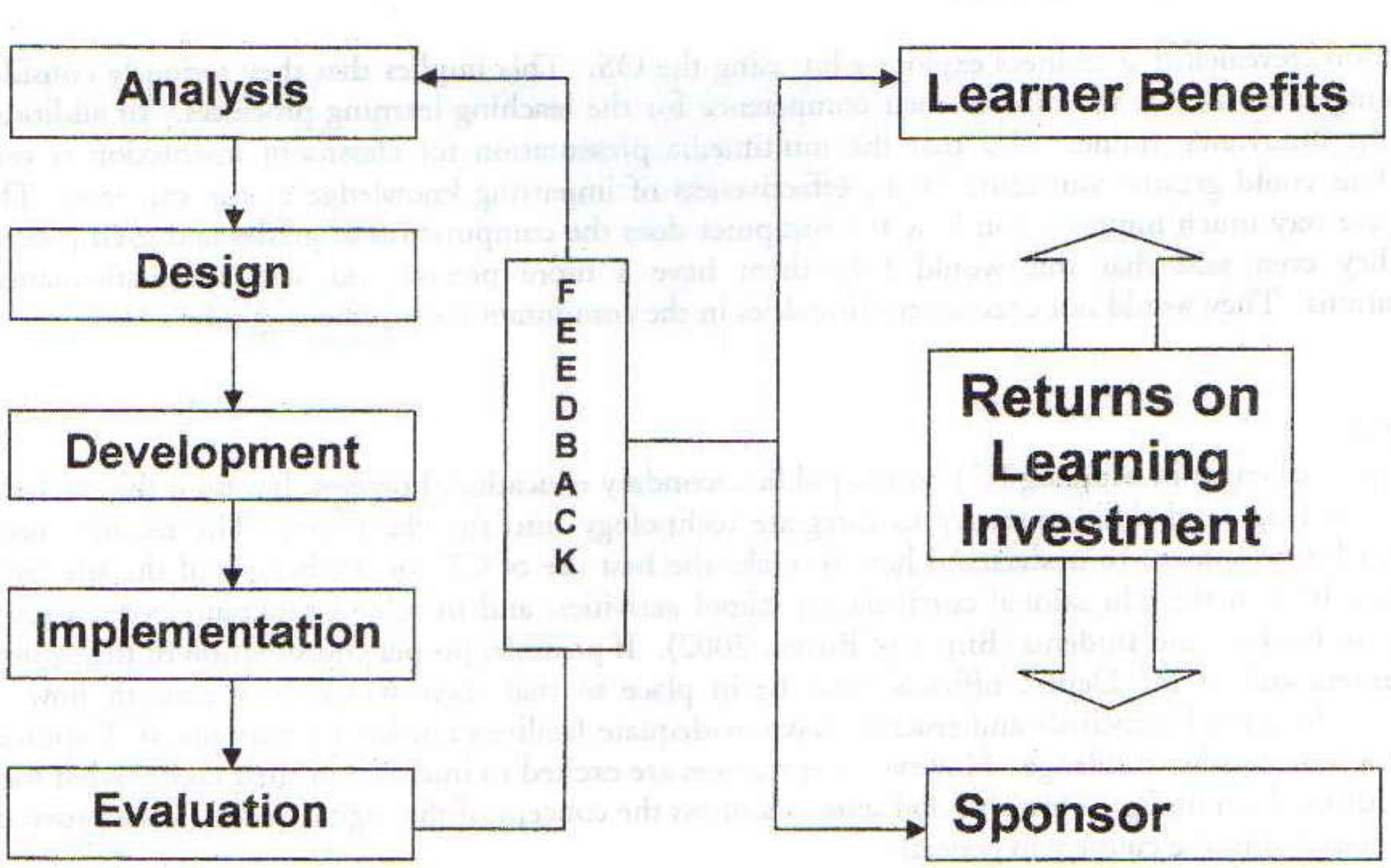


Figure1. The training model

A training needs assessment (TNA), through a focus group discussion and interviews with the secondary school administrators and teachers, was done. Results revealed that actually there are computers that could be utilized for classroom instructions only but the teachers' lack the technical know – how. In addition, since some computers are already defective, these teachers need to be trained on PC recycling or trouble shooting. The training design was formulated by the CICT in line with the education department's vision to have an ICT enabled education system that would transform students into "dynamic learners, values-centered, and responsible citizens. The teachers have to be ready and be well-equipped to work with the situation. Modules including trainers' guides were developed. The trainers' training followed. The implementation commenced in 2007 to date while the project is still on-going while monitoring is done through frequent visits with the consideration of the feedback mechanisms. This is in order to maximize the learning gains of both the trainees and the trainers.

During the training, active participation/involvement was encouraged of every trainee rather than being passive observations. The trainers engaged all the trainees during the actual training. Queries, clarifications, and questions were encouraged from the trainees. All these were addressed and answered by the trainers. This was done to ensure that everyone would be well-equiped when they go back to their respective schools. Evaluation of trainees was done every after each training. The results were amazing and overwhelming. Some trainees revealed that it was their first time to touch the computer. They were excited to acquire knowledge and skills that they could impart to their students. They feel proud and happy learning "how to learn" and "how to do" with the machines and with overflowing information of all sorts. The trainees who were quite familiar with other operating systems indicated that the Open Source (OS), like Linux has more features and were user friendly. Majority said that their students would have very meaningful and life-long learning when they could integrate computer technology in their lessons with the use of Linux operating system.

Observations revealed that trainees explore a lot using the OS. This implies that they seriously consider the training as an avenue to enhance their competence for the teaching-learning processes. In addition, during the interviews, trainees said that the multimedia presentation for classroom instruction is very useful. This could greatly contribute in the effectiveness of imparting knowledge to the students. The trainees are very much impressed on how the computer does the computation of grades and even process data. They even said that this would help them have a more precise and accurate mathematical computations. They would not encounter difficulties in the computation of students' grades.

Challenges

One of the challenges in bringing ICT to the public secondary education, however, has been the teachers' lack of knowledge and skills necessary to integrate technology into the classroom. The teachers need professional development to understand how to make the best use of CT for the benefit of the students. Integrating ICT in the educational curricula, in school activities, and in school programs poses a great challenge to teachers and students (Bitner & Bitner, 2002). If possible, proper coordination of the project implementers and of the DepEd officials must be in place so that there would be a smooth flow of activities. The school principals and teachers have inadequate facilities needed to maintain ICT sources which also pose another challenge. However, the trainees are excited to integrate in their classes what they learned during the training. This is a good start to address the concept of the digital divide in the province in particular, and in the country in general.

Similarly, the curriculum and the training providers lack a clear set of nationally recognized guidelines on what constitutes an appropriate ICT professional development for educators. The challenge still remains in the secondary education as well as in several sectors of the economy despite the available computers in the classrooms. Capacity-building for public secondary school teachers on CT is very relevant. The

students have high regard on the capacity of their teachers. It is a fact that many students could afford to have ICT gadgets at home; hence, they are advanced in terms of knowledge and skills on ICT. It is a great challenge for teachers to learn and to internalize the use of computers in the subjects they are teaching, and to integrate ICT in the classroom instruction. The teachers would also be trained in trouble shooting in coordination with the private service providers.

Lessons Learned

This section presents the lessons learned as shared by the trainees. Majority expressed that it is never too late to learn computer technology for teaching. After the trainings, computers are used as tools to engage students in critical, logical and interactive learning. Internet availability needs to be sustained if only to promote and provide life-long learning for students. The teachers could enhance and present their lessons interestingly and creatively if resources are given and if they are well-motivated. Computers could make work simple and easy. The use of the Free Open Source Software (FOSS) is very advantageous to all participants and beneficial to all schools as well, because it is not easily affected by virus. Besides, there is no need for licensing.

On the part of the trainers, it was a great learning experience that would enable them to share their talents with maximum tolerance and patience since many trainees have inadequate knowledge and skills. With this experience, the implementation of teaching-learning strategies to promote and enhance trainees' interest is considered. The trainers are able to cooperatively and collaboratively focus on the learner-centered environments that engage the trainees in their training. The trainers felt that the curriculum could be enriched by applying the lessons learned acquired by the trainees.

POLICY RECOMMENDATIONS

1. The training would be much effective if all public secondary schools are already connected to the Internet. This is a source of relevant information in the classroom. Teachers could present their updated, creative, innovative, and interesting lessons which would motivate the students to be actively participating in the class.

2. The DepEd should already consider the wide use of Free and Open Source Software (FOSS) in the secondary school curricula. This would create savings from the government since this software is license free and is not easily contaminated with computer virus.

3. The participation of other stakeholders in education is also sought in the upgrading and modernization of the public schools, especially those deprived, depressed, and underserved schools. The Local Government Units (LGUs) could be tapped to ensure the sustainability of the ICT programme. The LGUs can help in financing, in maintaining, and in operating the ICT laboratories.

4. The school administrators could motivate and encourage the teachers to use CT in their classroom. The trainees must re-echo the training to their co-teachers in order to empower every teacher to be technologically abreast so that they could make a difference in moulding the lives of the students.

REFERENCES

Bitner, N. & Bitner, J. (2002). Integrating technology into the classroom: Eight keys to success. *Journal of Technology and Teacher Education, 10*(1), 95-100. Retrieved October 20, 2008 from http://www.gecdsb.on.ca/d&g/ICT/Literature%20Review.htm

Itaas, E. C. (2009). Capacity-building for Philippine public secondary school teachers on the Information and Communications Technology Literacy Training Program. A paper read during the *4th World teachers day in Thailand and 12th UNESCO – APEID International Conference* in Bangkok, Thailand.

Introduction to ICT4E. (2006). *i*SCHOOLS ICT literacy training program for teachers

Lapus, J. (2008, October).Interview with the Inquirer.net,

Medium-term Philippine Development Plan 2004-2010 (2004).

Reno, H. (2009). *Assessment of public secondary school teachers Information and Communications Technology (ICT) literacy level.* Unpublished master's thesis. Bukidnon State University, Malaybalay City.

Seels, B., & Glasgow, Z. (1998). Making instructional design decisions (2nd ed.). Upper Saddle River, NJ: Merrill.

Tinio, V. L. (2002*). Survey of information and communications technology utilization In Philippine public high schools.* Retrieved September 10, 2008, from http://www.comcentrum.ph/observatory/pdf%20files/papers%20&20Publications/education/Survey%20of%20ICT%20in%20Public%High%20Schools.pdf

THE IMPACTS OF STUDENTS' COMPUTER KNOWLEDGE AND SKILLS ON THEIR INDIVIDUAL LEARNING PERFORMANCE

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ABSTRACT

Nowadays, highly competitive information technology is indicated by changes in the wide variety of fields. The changes, in turn, influence quality of the process and the products in those fields. In education, the use of information technology has also driven this industry to embrace more challenging tasks. With information technology, it is hoped that the students may achieve more innovative and effective learning which can achieve better learning performance. Computer-based learning system may make students easier in doing their tasks and is expected to help them easing information search for knowledge. This learning system also provides independent learning processes. This research was conducted to examine the impacts of computer knowledge and skills mastered by the students on their academic performance. Some aspects of computer knowledge and skills were used while the academic performance was measured by the students' GPA. The population in this research was the students of STIE Perbanas Surabaya, East Java, Indonesia. This research used convenience sampling taking the students who have passed the Accounting Information System course. The data collected using questionnaire delivered to the students directly. The data analyzed using regression method. The findings, limitation and implications were discussed.

Keyword: Students' computer knowledge, skills, individual performance

INTRODUCTION

Information technology makes activities more effective and efficient than usual, especially in business activities. It makes almost business activities in the world depend on this technology. Moreover, every job seeker needs basic computer skills and the ability to use such applications as word processor, spreadsheets, database programs, and presentation software to function in today's job market (Guy & Lownes-Jackson, 2010).

The use of information technology in the academe has driven this industry to embrace more challenging tasks. Students must adapt the extensive use of e-learning, including PowerPoint presentations in class, web-based discussions to further in-class dialogue, and the full range of information and communication technologies (Fichten, 2009). In order to help students gain a deeper understanding of key business concepts and encourage critical thinking, learning in class can be enhanced using more information technology (Buzzetto-More, 2008). With information technology, it is hoped that the students may achieve more innovative and effective learning which can achieve better learning performance.

Computer-based learning system also makes students do their tasks easier and help them ease information search for knowledge. This learning system also provides independent learning processes. Grant, Malloy,

and Murphy (2009) defined computer literacy as understanding of computer characteristics, capabilities, and applications, as well as an ability to implement this knowledge in the skillful, productive use of computer application suitable to individual roles in society. Computer proficiency is the knowledge and ability to use specific computer applications. Computer literacy and proficiency are often used interchangeably. However, the increasing computer proficiency can positively impacts to computer literacy.

Educators recognize the need to increase the proficiency skill levels of all students information technology. Most universities now strive to incorporate information technology into all aspects of the learning process. In North Carolina, starting with the Class of 2001, students are required to pass a computer literacy assessment in order to complete twelfth grade and graduate from high school (North Carolina Online Test of Computer Skills, 2007 in Grant, Malloy & Murphy, 2009)

From this background, this research examined the impacts of students' computer knowledge and skills on their individual learning performance. Some aspects of computer knowledge and skills were used while the academic performance was measured by the students' GPA.

LITERATURE REVIEW

Previous Research

Guy and Lownes-Jackson (2010) investigated students' self-efficacy beliefs regarding their level of computer proficiency and their demonstrated knowledge and skills using Microsoft Word, Excel, PowerPoint, and Access. This research encompasses students from two business schools located at two separate universities and spans a period of three years beginning fall 2007 through Spring 2009. The population was business students self-enrolled in the 200-level microcomputer application courses. The findings revealed discrepancies between students' self-efficacy beliefs regarding their level of computer knowledge and skills and students' demonstrated abilities using Word, Excel and Access, and no discrepancies with PowerPoint.

Buzzetto-More and Mitchell (2009) investigated student performance and perceptions in a web-based competitive computer simulation at key junctures throughout the curriculum but focused primarily on the course Strategic Management. The samples were 138 senior business majors of University of Maryland Eastern Shore. The data were collected by survey method and data were analyzed using ANOVA. The findings indicated that students felt that the simulation helped them to understand the application of key concepts and learn the decision making process that occurs in professional business practice.

Grant, Malloy and Murphy (2009) explored U.S. College students' perceived mastery of computer skills compared to actual scores on a computer skills assessment of 200 business students in a medium-sized public university located in North Carolina. They used two methodologies, as a survey to capture students' perceptions of their computer proficiency and a computer skills assessment to measure their actual performance. This research used survey method. They found that there is a significant difference in the students' perception of their word processing skills and actual performance; no significant difference in perception and performance for their presentation skills, and a significant difference between perception and performance in their spreadsheet skills.

Harrison and Rainer (1997) tested the self-efficacy-performance model found in Bandura's social-cognitive theory in a work setting. The samples are 776 American university employees, and with discriminated function analyses. This research was using survey methods. The result indicates that

increased performance with computer related tasks was significant related to higher levels of self-efficacy. Results provide additional support for social-cognitive theory as outlined by Bandura.

Students' Computer Knowledge and Skills

Students' computer knowledge and skills in previous research refer to students self-efficacy. Self-efficacy refers to an individual's belief in his/her ability to perform a specific task. Self-efficacy reflects an individual's perception of his/her ability based on past performance or experience (Grant, Malloy, & Murphy, 2009).

Agarwal, Sambamurthy, and Stair (2000) defined general computer self-efficacy is defined as an individual's judgment of efficacy across multiple computer application domains while specific computer skills is defined as perceptions of ability to perform specific computer-related tasks in the domain of general computing. Hasan's (2003) research showed that experience with computer programming and graphics applications has strong and significant effects on computer self-efficacy beliefs while spreadsheet and database applications demonstrated weak effects.

Individual Learning Performance

Performance of the students can be seen on the score. To examine student performance, Buzzetto-More and Mitchell (2009) considered score and grade point average (GPA). Students GPA were compared against student performance in order to determine whether GPA is an indicator of student's performance on the simulation (Spring & Fall, 2008). Nonis and Hudson (2010) used academic semester GPA (SGPA) to measure students' academic performances.

RESEARCH METHOD

Sampling Method

The population in this research was the students of STIE Perbanas Surabaya, East Java, Indonesia. Convenience sampling was employed focusing only on the students who have passed the Accounting Information System course. The data was collected using questionnaire directly delivered to the students. The questionnaires were distributed to 400 students of STIE Perbanas Surabaya, but only 310 were given back and about 305 questionnaires were valid.

Operational Definition

The survey contained items measuring students' computer knowledge and skill and individual learning performance. A four-point response scale used to measure the variable, were 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. The instrument of the questionnaire was adapted from Fagan et al. (2003) and Brinkerhoff (2006) with modifications according to the condition in Indonesia.

Students' computer knowledge and skills is about the self-efficacy of the students. Self-efficacy refers to an individual's belief in his or her ability to perform a specific task. Self-efficacy reflects an individual's perception of his or her ability based on past performance or experience.

Individual learning performance is about the student grade point average (GPA). Students GPAs were considered and compared against student performance to determine whether GPA is an indicator of a student's likely performance.

Data Analysis Technique

Data analysis was performed in the following stages. The first analysis was descriptive analysis. This analysis was performed to get findings on the respondent's demography. Those collected findings were further presented in tables for easy understanding and readability. These were explained in four things: access, interaction, response, and result. The second analysis was tested using Multiple linear regressions was used to determine the impact of computer knowledge and skills obtained by the students on their academic performance.

RESULT AND DISCUSSION

Descriptive Statistic

Table 1 describes the characteristics of respondents in terms of gender, academic year, GPA, and course subject. Most of the respondents were female (70.16%). In academic year 2007-2008, the mean age were 21 years (57.70%). Most of the respondents have GPA ranging from 3.0 to 3.25 were 4 as the highest grade. The questionnaires are just for the Accounting students there were also Management students answered the questionnaires (0.98%). The Accounting Major comprised 270 students (88.53%). About 32 students did not answer their major classification.

Table 1
Characteristics of Respondents

Gender	Number of students	%
Male	87	28.20
Female	213	70.16
None	5	1.64
Total	305	100.00
Academic year	Number of students	%
2008	111	36.39
2007	176	57.70
2006	5	1.65
2005	2	0.66
≤ 2004	3	0.98
None	8	2.62
Total	305	100.00
GPA (max. 4)	Number of students	%
2 - 2.5	8	2.62
2.5 - 2.75	28	9.18
2.75 - 3	43	14.10
3 - 3.25	75	24.59
3.25 - 3.5	69	22.63
> 3.5	74	24.26
None	8	2.62
Total	305	100.00
Department (Program)	Number of students	%
Accounting (bachelor)	270	88.53
Management (bachelor)	3	0.98
None	32	10.49
Total	305	100.00

Validity and reliability test. Validity test is performed to evaluate whether the questionnaire is valid or not (Ghozali, 2006). The questionnaires were valid because the probability levels of all indicators were below 0.01. Besides, the score or correlation coefficient is greater than .5. The reliability test indicates that the instrument is reliable (Ghozali, 2006). From the data in Table 2, the alpha scores of all variables were more than 0.60, hence, variables are reliable.

Table 2
Reliability Test Result

No.	Variable	Cronbach's alpha
1.	Students computer knowledge	0.797
2.	Students skills	0.766
3.	Individual Learning Performance	0.905

Diagnostic test. Diagnostic test is to detect the existence of multicolinearity, heteroskedasticity, autocorrelation and normality problems, specific error, and the fit of multiple regression models. Diagnostic test is firstly done to detect autocorrelation. Runs test was used. If runs test value has probability more than .05, the autocorrelation does not exist in the regression model (Ghozali, 2006). The runs test value is 0.863, hence, there was no autocorrelation.

Heteroskedasticity problem was tested using Glejser test. If probability value of each variable has probability more than .05, heteroskedasticity problem does not exist in the regression model (Ghozali, 2006). The Glejser test was to be found significant for dependent variable students' skill and value 0.658 for dependent variable students' computer knowledge. All variables have probability value of more than .05, hence, heteroskedasticity problem does not exist in the regression model.

Multicolinearity problem was tested using Variance Inflation Factor (VIF). Iif there is no correlation between and among independent variables, multicolinearity problem does not exist in the regression model (Ghozali, 2006). Multicolinearity showed that the tolerance, was 0.700 and VIF was 1.429 students' computer knowledge and students' skills. This implies that there was no multicolinearity given the rule of thumb (for tolerance < 1 and VIF > 10).

Moreover, normality problemwas tested using one sample Kolmogorov–Smirnov test. If the probability value of nonstandardized residual has probability more than .05, the normality problem does not exist in the regression model (Ghozali, 2006). The value of Kolmogorov–Smirnov statistic 0.002, hence, there is normality problem in the regression model. This situation can happen because of the high variation in the answer of the respondents. This can be seen from the value of standard deviation and N (Table 3).

Table 3
Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	2.5783	4.0783	3.3056	.25468	303
Residual	-.73785	1.01703	.00000	.33073	303
Std. Predicted Value	-2.856	3.034	.000	1.000	303
Std. Residual	-2.224	3.065	.000	.997	303

a. Dependent Variable: learning performance individual

Regression results. Having met the four classic requierments of regression analysis, the regression analysis resulted in the following findings: The Goodness of Fit test in Table 4 shows the value of adjusted R^2 of 0.368 which means that 36.8 percent of the value of the dependent variable can be explained by the independent variables.

Table 4
Model Summary

Model	*R*	*R* Square	Adjusted *R* Square	Std. Error of the Estimate
1	.610[a]	.372	.368	.33183

a Predictors: (Constant), AVGSS, AVGSCK

The *F* test, as shown in Table 5, indicates that the student's computer knowledge and skills are very significantly associated with the Individual Learning Performance (ILP). This indicates that students' computer knowledge and skills can still improve students' ILP. Grant, Malloy, and Murphy (2009) indicated that there are significant differences in the students' perception of their word processing skills and actual performance, no significant difference in perception and performance for their presentation skills, and a significant difference in perception and performance of their spreadsheet skills.

Table 5
F- test ANOVA(b)

Model		Sum of squares	df	Mean square	*F*	Sig.
1	Regression	19.588	2	9.794	88.947	.000[a]
	Residual	33.033	300	.110		
	Total	52.620	302			

a Predictors: (Constant), AVGSS, AVGSCK
b Dependent Variable: AVGILP

Table 6 shows that student's computer knowledge and skills have significant impact on ILP. This implies that familiarity with the computer will reduce ability and skills of the students. Guy and Lownes-Jackson (2010), Buzzetto-More and Mitchell (2009), Grant, Malloy and Murphy (2009), Harrison and Rainer (1997) research support this result.

Table 6
Coefficients(a)

Model		Nonstandardized Coefficients		Standardized Coefficients	*t*	*p* value.
		B	Std. Error	Beta		
1	(Constant)	.780	.214		3.644	.000
	AVGSCK	.618	.077	.424	7.980	.000
	AVGSS	.239	.055	.231	4.356	.000

a Dependent Variable: AVGILP

CONCLUSION, LIMITATIONS, DIRECTION FOR FUTURE RESEARCH AND IMPLICATION FOR INSTITUTION

The objectives of this research are to explain the impact of student's computer knowledge and skills on ILP. It was revealed that student's computer knowledge and skills are significantly affecting ILP. The students with GPA < 3 have no knowledge and skill in using of computer. On the other hand, students with GPA > 3 have better knowledge and skill in using of computer. Improvements in the computer applications course should be given immediate attention to cater there students with GPA < 3.

This research was constrained by two factors. First, the samples used are the accounting students. Thus, the application of these results to individuals participating in other course probably can make a different result. The second limitation is the omission of other factors which can influence ILP.

Future research should monitor impacts longitudinally to determine academic success as a function of learning performance, examine the changing nature of relationships among individual learners and instructors, and assess the impact of social factors on outcomes of the learning process.

It can be that computer knowledge and skills is important for increasing ILP. Therefore, the lecturers and instructors must encourage their students to became more adept in using computers.

REFERENCES

Agarawl, R., Sambamurthy, V., & Stair, R. (2000). Research report: The evolving relationship between general and specific computer self-efficacy – An empirical assessment. *Information Systems Research, 11*(4), 418-430.

Banta, T. & Howard, M. (2004). Assesing information literacy and technological competence. *Assessment Update, 16*(5), 3-14.

Brinkerhoff, J. (2006). Effects of a long-duration, professional development academy on technology skills, computer self-efficacy and technology integration beliefs and practices. *International Society for Technology in Education*, 39(1), 22-43.

Buzzetto-More, N., & Mitchell, B. C. (2009). Student performance and perceptions in a web-based competitive computer simulation, interdisciplinary. *Journal of E-Learning and Learning Objects, 5*, 73-89.

Fagan, M. H., Neill, S., & Wooldridge, B. R. (2003). An empirical investigation into the relationship between computer self-efficacy, anxiety, experience, support and usage. *Journal of Computer Information Systems*, 95-104.

Fichten, C. S., Asuncion, J. V., Barile, M., Ferraro, V., & Wolforth, J. (2009). Accessibility of e-learning and computer and information technologies for students with visual impairments in postsecondary education. *Journal of Visual Impairment & Blindness*, 543-557.

Grant, D. M., Malloy, A. D., & Murphy, M. C. (2009). A comparison of student perceptions of their computer skills to their actual abilities. *Journal of Information Technology Education, 8*, 141-160.

Ghozali, I. (2006). *Aplikasi analisys multivariate aplikation with SPSS programme* (4th ed.). Badan Penerbit Universitas Diponegoro.

Guy, R. S., & Lownes-Jackson, M. (2010). An examination of students' self-efficacy beliefs and demonstrated computer skills. *Issues in Informing Science and Information Technology, 7*, 285-293.

Hasan, B. (2003). The influence of specific computer experiences on computer self-efficacy beliefs. *Computers in Human Behaviors, 19*, 443-450.

Nonis, S. A. & Hudson, G. I. (2010). Performance of college students: Impact of study time and study habits. *Journal of Education for Business, 85*, 229-238.

IMPLEMENTATION OF ELECTRONIC TECHNOLOGY IN THE CURRICULUM: A CASE IN ACCOUNTING ETHICS COURSE AT STIE PERBANAS SURABAYA

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ABSTRACT

The screen-based technological revolution, which is only a decade old, has a profound effect on the way humans learn. Due to such a condition, STIE Perbanas Surabaya implements the new electronic technology in the learning process to improve the quality of the alumni of the higher education. Accounting ethics is one of the courses that use e-learning process to improve the quality of students. This course is attended by 128 students (two classes) from March to June 2010. The paper illustrates the planning and the process of electronic technology implementation in the student-centered learning process as a tool by students to understand accounting ethics course, the difficulties and obstacles of the program, and student involvement. The 69 students involved in this course were required to give opinions about the implementation of this program and suggestions to improve the implementation of the next e-learning process. Based on the students' opinions and suggestions, it is advisable that STIE Perbanas Surabaya should place the electronic technology to organize the curriculum, especially before students finish their study.

Keywords: Electronic technology, accounting ethics, student participation

INTRODUCTION

The era of globalization has forced nations to adopt information technology. This information technology is an important tool to improve international relationship. Besides, it can also advance nation economy as well as accelerate the education improvement. The modern electronic technology and the internet have revolutionized the traditional learning system, and offered learning opportunities to all the people interested in their professional evolution (Andronie, 2006). Responding adequately to this challenge amidst today's cultural shifts, to which young people are especially sensitive, necessarily involves using new communications technologies (Pope Benedict XVI, 2010).The development of the modern learning technologies not only helps the evolution of the high education but also accelerates the achievement of the higher education objectives. Thus, electronic technology is not only a tool to easily explain the material course in high education, but also facilitate the understanding of the material course.

Accounting ethics course is a part of Accountancy, especially in Economics. Becker and Watts (1996) said that current teaching practices that heavily depend on traditional lectures cannot be judged to increase the effectiveness of educating students in Economics. After Enron's debacle in 2002, Accounting Ethics course started to be studied in higher education. This is expected to improve understanding the importance of ethics, especially Accounting Ethics. After finishing their study, the students are expected to have an understanding about moral ethics and the way how to solve the ethics dilemma. This is good when they

work as an accountant; such knowledge can be used for a guidance in making decision. Therefore, the learning process of Accounting Ethics is necessary.

The learning process of Accounting Ethics can be attractive when performed by electronic technology. Besides getting the course materials from the lecturer, the students can also obtain them from the online-internet, dealing with Accounting Ethics cases and solutions. The students can submit their homeworks to the lecturer by email. They can also explain and discuss the course materials in a class by means of electronic technology. By doing so, there exists enrichment in the learning process.

The article illustrates the planning and process of electronic technology implementation to enhance student-centered learning process and to be used by the students as a tool to understand Accounting Ethics, the difficulties and obstacles of the program, and students' involvement. The students involved in this course are required to give an opinion on the implementation of this program to improve the implementation of the next e-learning process. Based on the students' opinions, it is advisable that STIE Perbanas Surabaya should implement the electronic technology curriculum, especially before students finish their studies.

LITERATURE REVIEW

The literature review describes the new paradigm in the learning process, student-centered learning, and four pillars of education. It also explains electronic technology as a learning source and tool.

New Paradigm in the Learning Process

In a conventional educational system, the students get knowledge through a process called instruction or teaching. In this condition, the success of educational system solely depends on the lecturer. Thus, it is teaching but not a learning process, yet, it is teacher-centered. Therefore, it is time to shift from a conventional paradigm into a new one. A college is an institution that exists to produce learning (Barr & Tagg, 1995). Consequently, teaching process should be changed into learning process, or student-centered learning (SCL).

In the era of globalization, students can not rely on the lecturer's activities only. They have to learn a lot from other sources like internet that is easily accessed. Students should use any learning instrument in their environment as a learning source. Teaching is about providing the students with opportunities to learn (Jones, 2000). Therefore, learning orientation is moved from teacher oriented learning to student-centered learning.

Student Centered Learning

One of the education problems in Indonesia is a wide gap between student knowledge and its behavior (Afiatin, 2010). Many students understand or memorize the course materials but they cannot apply it for life-quality improvement. Due to this condition, they need the process of learning which is SCL. This SCL commensurates with external situation when the student will make a decision to solve the problem. By SCL, the students are asked to have critical ability and are forced to solve the problem by themselves.

Some methods in SCL are: (a) Information sharing method (ISM) which consists of brainstorming, group discussion, panel discussion, symposium, and seminar; (b) Experience-based method (EBM) which consists of simulation, role playing, game, and meeting group; and (c) Problem solving based methods (PSM) which consists of case study, workshop, and tutorial learning. In SCL process, the students individually or in group must be active to get and digest the course materials. In such instances, the

lecturer just becomes a facilitator rather than being more active compared to the students. In SCL, the learning focuses on problem solving, team skills, learning how to learn, continuous improvement, interdisciplinary knowledge, interacting and processing information, and technology integral learning.

Four pillars for education

In 1996, United Nation Educational, Scientific and Cultural Organization (UNESCO) established the international commission on education for the 21st century led by Jacques Delors. In its report, the commission recommended the four pillars of education. These pillars are learning to know, learning to do, learning to live together, and learning to be.

The emphasis of the first pillar is combining a sufficiently broad general education with the possibility of in-depth work on selected number of subjects. In the 2nd pillar, the students receive a lot of competence and can work in team. In 3rd pillar, the students have to develop an understanding of others and their history, traditions and spiritual values and create a new spirit to manage the inevitable conflicts in an intelligent and peaceful way. The last pillar recommends that in 21st century, everyone needs to exercise a greater independence and judgment combined with a stronger sense of personal responsibility for the attainment of common goals.

In this period, the role of electronic technology is very important. All people in the world strive to understand and use electronic technology in all activities. Without electronic technology, a person or a nation cannot survive and they must be excluded. Because of that, the electronic technology should be utilized and maximized for the effort of making higher education implement the SCL.

Electronic Technology as a Learning Source and Tool

Implicitly, UNESCO also recommended that a learning process for a person throughout life be the key to the access to the 21st century. The formal or non-formal educational institution is only "a temporary stop over" in a long-life learning process of a person. In temporary long-life, a teacher, a lecturer, a tutor, or an instructor is not only the main learning resource for a learner. He or she is only one of the learning resources.

Electronic technology is a combination of computers, internet, and hypertext (Lasso, 2002). For instance, computers and the Internet provide a new vehicle for learning. Hypertext helps to become aware of the intimate relation between learning and technology. It has been the fact that the electronic technology communication revolution has a great effect on two fundamental aspects of human learning: the centre of learning and the learning process. Learning is controlled by whoever or whatever controls information. This control is referred to as the centre of learning.

Lasso (2002) said that the electronic technology communication revolution is also changing the way human beings learn anything. Essentially, the human brain learns by processing information received through sensory channels from a vast array of sources. Electronic technology permits a person to read many books and combine their ideas to produce creative interactions.

Other sources are laboratory, library, and place for workshop, seminar and conference, learning facility basing on multimedia as video, and audio-broadcasting, video, and audio-conference, and so on. Internet, as an application of electronic technology in this moment, is a learning source which has been continually developed in this decade. In virtual communication, the students can look for and develop their knowledge by themselves using e-learning with a learning network.

Ghosh and Renna (2006) quoting Chickering and Gamson (1987) explained that interactive technology will help to enhance the principles of good practice in undergraduate education. It is an electronic technology. The seven principles of good practice are as follows.

1. Encouraging student - faculty contact;
2. Encouraging cooperation among students;
3. Encouraging active learning;
4. Giving prompt feedback;
5. Emphasizing time on task;
6. Communicating high expectations; and
7. Respecting diverse talents and ways of learning.

THE IMPLEMENTATION OF ELECTRONIC TECHNOLOGY IN ACCOUNTING ETHICS COURSE

STIE Perbanas Surabaya has a website named www.perbanas.ac.id. There are some facilities in this website (e.g. news, web mail, student information system, e-learning, digital library, and galleries). In such website, it is expected that every lecturer can use the e-learning in their implementation of learning process.

The Learning Process Plan

The learning planning process of Accounting Ethics course starts preparing course materials by the lecturer. The course materials are taken from books, journals, and other sources with reference to accounting ethics. The lecturer also prepares electronic technology program of accounting ethics course. In the first course meeting, the lecturer presents a contract of learning process. In STIE Perbanas Surabaya, the website address of learning management system is named http://kuliah.perbanas.ac.id/. This system uses "moodle software". In the website, there are some facilities, (e.g. add a resource and add an activity). In this program, the students and the lecturers can communicate with each other. The students can send homework and the lecturers can evaluate, comment, and score the performance of homework of the students.

The Learning Implementation by Electronic Technology in Accounting Ethics Course

The steps of implementation of Accounting Ethics learning by electronic technology are performed as follows:

1. The lecturer uploads the learning contract of Accounting Ethics course in its file by using the facility of "add a resource", at subfacility of "link to a file or web site".
2. The course materials and the student homeworks are uploaded to each "topic outline". The 10 topic outlines of accounting ethics course are as follows:
   a) The overview of Business and Environment Ethics
   b) Governance, Accounting, and Auditing Reform, Post-Enron
   c) Corporate Ethical Governance and Accountability
   d) Ethical Behaviour in Accounting: Ethical Theory
   e) Code of Ethical Conduct of Indonesia Accountant
   f) Ethics in Auditing
   g) The Ethics of Managerial and Financial Accounting
   h) Professional Accounting in the Public Interest,
   i) Approaches to Ethical Decision Making
   j) The Accounting Profession in Crisis

3. Before the course starts, the students can download the materials of the course through the topic outline. After learning the materials, the students upload his/her homework in accordance with the lecturer instruction.
4. In the class, the student or the group of students presents the course topic. The following activity is a discussion between the students about the course topic. The student presentation must use electronic technology software (e.g., power point).
5. Finally, the lecturer evaluates, comments the result of presentation and discussion, and scores in column "status grade". Every student will know the score.

Difficulties and Obstacles of Electronic Technology Implementation

The difficulties and obstacles are not only for learning process in Accounting Ethics course, but also for all courses in STIE Perbanas Surabaya. These obstacles are as follows:

1. Although a learning facility for electronic technology is already prepared, not all lecturers use this facility. A total course in the institution is 114. The courses, using electronic technology are 97. The reminders are not used yet. It is caused by a lack of understanding to use electronic technology in learning process.
2. There is no regulation in the institution that compels the lecturer to use electronic technology for the learning process.
3. Not all students have the toll of electronic technology by themselves. So they use the facility in campus. It slows down the homework delivery.
4. There are 22 facilities in learning management system, but the lecturers only use two facilities. There are links to a file or web site and upload a single file.

Students Opinion and Suggestion to Improve Learning Process by Electronic Technology

Respondents. There were 128 students attending Accounting Ethics course used as the respondents. But only 59 respondents could be analyzed. The response rate is 54 percent from the total students attending the course. The response rate is low because there were some questionnaires answered incompletely. Thus, there were only 69 complete and valid samples.

Validity and reliability tests. The validity and reliability of questionnaires were tested. The result indicates that the questionnaires are valid which as indicated by the correlation score. Likewise the reliability of questionnaires was proven by the Cronbach's Alpha.

THE STUDENTS' OPINION AND SUGGESTIONS

Opinions

The students stated that e-learning is useful in learning process, and the use of electronic technology helps the accuracy of their presence in the class. The respondent's emphasized that assignments downloaded in e-learning are in accordance with a learning contract of Accounting Ethics course. Moreover, uploading the assignments in Accounting Ethics course was easier, cheaper, and simpler than by hard copy. They also described that in e-learning of Accounting Ethics course, there is enough space to upload an assignment and the limit time to deliver an assignment by e-learning is suitable for expectation. Finally, the respondents agree that presentation of Accounting Ethics course by power point is good and clear to understand.

Suggestions

The respondents gave the following suggestions:
1. The exterior of e-learning should be nicer and more interesting;
2. Upload space should be larger and more than one attachment;
3. Course material discussed is uploaded in e-learning;
4. There are other alternatives to submit assignments when there is nuisance in uploading; and
5. If any class is cancelled, uploading should be extended.

DISCUSSION

The article describes the implementation of electronic technology in learning process in STIE Perbanas Surabaya. In STIE Perbanas Surabaya, the website address of learning management system is named http://kuliah.perbanas.ac.id/. The system uses "moodle software". The course used as an example of e-learning implementation is Accounting Ethics. The steps of learning implementation of accounting ethics by electronic technology are: (a) The lecturer uploads the learning contract of Accounting Ethics course in its file by using the facility of "add a resource", at sub facility of "link to a file or web site"; (b) The course material and the student homework are uploaded to each "topic outline"; (c) Before the course starts, the students can download the material course through the topic outline. After learning its material, the students upload their homework in accordance with the lecturer instruction; (d) In the class, the student or the group of students presents the course topic; and (e) The lecturer evaluates, comments the result of presentation and discussion, and scores in column "status grade".

Although the electronic technology is important in the learning process, there are some difficulties and obstacles in implementing this program. These obstacles can be listed such as: (a) not all lecturers are using the facility because of lack of understanding about electronic technology; (b) no regulation in the institution that compels the lecturer to use electronic technology in their learning process; (c) not all students have the tolls of electronic technology by themselves; and (d) there are 22 facilities in learning management system, but only two are used by the lecturers.

Some of the students attending the Accounting Ethics course were asked to provide opinions and suggestions to improve the next learning process. They stated that through e-learning, downloaded assignments, can truly be cheaper and it is simpler to upload. Finally, they also comment that by using power point, it is good and clear to understand the course materials.

However, the students also suggested that: (a) the view of e-learning should be nicer and more interesting; (b) upload larger space and more than one attachment; (c) the course materials discussed should be uploaded in e-learning; (d) there should be other alternatives to submit assignments when there is problem in uploading; and (e) if any class is cancelled, uploading should be extended. Finally, the paper concludes that the implementation of e-learning is important. It means that the e-learning is useful to improve the learning process, especially in accounting ethics course.

CONCLUSION

There are some conclusions can be asserted in this research. The implementation of electronic technology is the important aspect in the improvement of learning process in higher educational institution. Electronic technology can help the students to understand the materials of the course, especially in Accounting Ethics course. The use of electronic technology is cheaper, faster and more accurate in learning

process, especially in finishing the assignment of the lecturer. Finally e-learning is useful for accelerating the understanding of accounting ethics course. It is hoped that STIE Perbanas Surabaya should include the electronic technology in the curriculum.

REFERENCES

Andronie, M. (2006). E-Learning course guide. Paper presented to the *International Scientific Symposium - Quality Management in Higher Education*, Spriru Haret University

Afiatin, T. (2010). *Learning based on student-centered learning.* Retrieved on May 20, 2010, from http://www.inparamatric.com

Barr, R. B. & Tagg, J.(1955). *From teaching to learning, a new paradigm in undergraduate education.* Retrieved May 12, 2010, from http://critical.tamucc.edu/~blalock/readings /tch2learn.htm

Becker, W. E. & Watts, M. (1996). Chalk and talk: A national survey on teaching undergraduate economics. *American Economic Review, 86.*

Ghosh, S. & Renna, F. (2006). Technology in support of good pedagogy: Electronic response systems and peer instruction in an economics classroom. *Social Science Research Network.*

Jones, M. J. (2000). *Curriculum development.* Jakarta: EEDP DGHE.

Lasso, R. (2002). *From the paper chase to the digital chase: Technology and the challenge of teaching 21st century law students.* HeiOnline –43 Santa Clara L.Rev.

Pope Benedict XVI. (2010). The priest and pastoral ministry in a digital world: New media at the service of the word. Message for the *44th World Communications Day.*

UNESCO. (1996). *Treasure within report to UNESCO of the international commission on education for the twenty first century.* UNESCO publishing.

Experiences, Learning and Sharing from Global, Regional and Intra-regional Collaborations

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MANAGEMENT OF THE ORGANIZATIONAL CULTURE OF PARISH SCHOOLS IN METRO MANILA: IMPLICATIONS ON ORGANIZATIONAL EFFECTIVENESS

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ABSTRACT

This paper examined the organizational culture of selected parish schools in the Manila Archdiocese and Parochial Schools Association (MAPSA) and its implication on the organizational effectiveness of these schools as an association. In particular, this paper sought to identify the interventions that might be employed to manage the prevalent organizational culture of the school to bring about organizational effectiveness.

In this study, the organizational culture of parish schools was assessed using seven key result areas, namely; (a) adherence of the schools to Catholic education, b) organizational structure, (c) governance, (d) human resources, (e) curriculum and instruction, (f) physical and material resources, and (g) community support. Fifteen strategic directions for the key result areas identified based on the assessment of the organizational culture of the schools were drawn to effect organizational effectiveness.

The study was conducted using descriptive, comparative, qualitative research method. Documentary analysis, questionnaires, interviews and focused group discussions were employed in the conduct of study. This study recommends that two higher educational institutions that belong to the Archdiocese of Manila be, likewise, subjected to the same study in order to validate the results this research.

Keywords: Organizational culture, parish school, organizational effectiveness

INTRODUCTION

Organizations are expected to be dynamic, vital and nourishing places to work in which people behave according to the established norm of conduct and are motivated to achieve the challenging goals and objectives of the institution, and where every member seeks to take responsibility in making his/her organization effective. In most successful organizations, managers and employees work together to align themselves with organizational initiatives and objectives and build organizational culture through creative and continually changing methods (Parker, 2000).

Schein (1985) claims that culture is important to an organization. He further believes that the organization's success depends largely on the leader's understanding and management of organizational culture. He is in agreement with Parker (2000) that organizational cultures can be designed to empower employees to achieve personal growth and exceptional performance.

Schools are considered as important organizations that are tasked to shape and mold the young entrusted to them. Hence, schools need to continually improve in order to satisfy their stakeholders, particularly the

students and their parents. It is important that the prevailing culture schools and how they are managed, individually or collectively, be studied and understood, in order to ensure that they live their vision and achieve the objectives they set and they become effective schools. Improvement in schools is most likely to be achieved when there is a culture that encourages everyone to give their best both individually and collectively. The challenge for the leaders of organizations is to foster and manage its culture, as this is one key to achieving the desired improvement.

In the Philippines, there are more than 1,250 schools that are members of the Catholic Educational Association of the Philippines (CEAP) and offer early childhood education, elementary education, secondary education, and tertiary education. Among these schools are those run by the religious congregations of men and women and are directly under the supervision of their Superior Generals, and schools that are run by diocesan clergy under the jurisdiction of the local ordinary or the Bishop and are known as parish (parochial) schools. While the governance of congregational schools is different from the governance of parish schools, they both adhere to the mandate of performing the two-fold function of education and evangelization. Catholic schools are venues for religious and spiritual education and for cultural education. The two dimensions of spiritual/religious education and cultural education must be integrated because they are rooted on the same Gospel values.

To respond to the call of giving authentic Catholic education in partnership with the parishes, the idea of unifying the archdiocesan and parish schools in the Archdiocese of Manila was conceived as early as 1950s. On November 15, 1960, 29 schools organized themselves as an association called Manila Archdiocesan and Parochial Schools Association (MAPSA). From 29 schools in 1960, the number of member schools of MAPSA schools has grown to 86 to this present date, including nine colleges, making it the biggest among parish schools associations in the country. However, in 2002, the original Archdiocese of Manila was subdivided into six dioceses, leaving 28 out of 86 member-schools and colleges, the subject of this study.

Statement of the Problem

The study included eight parish schools in the Archdiocese of Manila that offer basic education and have diocesan clergy (parish priests or pastors) as school heads or school directors. It aimed to assess the organizational culture of MAPSA as a school system in general and its implication on the organizational effectiveness of MAPSA.

In particular, the study sought to answer the following:

1. Based on the documentary analysis of the schools' history, vision-mission statement, manuals such as student handbook, faculty manual, nonteaching manual, administrative manual, school publications, and minutes of the meetings, what is the organizational culture of the MAPSA – member schools in terms of the following dimensions:
   a) Adherence to the characteristics of Catholic education;
   b) Organizational structure;
   c) Governance;
   d) Human resources;
   e) Curriculum and instruction;
   f) Physical and financial resources; and
   g) Community support

2. What interventions are suggested to manage the prevalent organizational culture of the school to bring about organizational effectiveness in terms of the above mentioned dimensions?

THEORETICAL FRAMEWORK

In MAPSA member-schools, effective educational management and leadership do not happen in a vacuum, but rather within the culture of the Catholic school. Culture is the shared values, beliefs and commitments of school members (Lunenberg & Ornstein, 1991); Schein (1985); Borromero, 1993). What a Catholic school stands for and believes about evangelization and education, what it seeks to accomplish, what its essential elements and features are and what image it seeks to project are the defining characteristics that shape the substance of its culture.

The organizational culture of a parish school is very much different from other schools. The document *The Religious Dimension of Education in a Catholic School* (1988) of the Sacred Congregation for Catholic Education states that while a Catholic school pursues cultural goals and the natural development of youth to the same degree as any other school, what makes the former distinctive is its religious dimension that is found in (a) the educational climate, (b) the personal development of each student, (c) the relationship established between culture and the Gospel, and (d) the illumination of all knowledge with the light of faith. Thus, MAPSA as an association has adopted the theme "That Christ be formed", that is, Christ is the reason for the school-the unseen but ever present teacher in the classrooms, the model of the faculty and the inspiration of the students.

In this paper, the analysis of the culture of MAPSA, as an association of Catholic schools, takes into consideration the Catholic identity and practice members of the school communities, where every member has a firm and accurate concept of his/her role as a Catholic by living the faith, receiving the sacraments, and learning the elements of faith. Evangelization, by word and example, enables the members to absorb and live their Catholic values.

In this study, the culture of selected parish schools was analyzed within the context of Catholic education. Culture management is done through:

1. Assessment of the existing culture based on the documentary analysis and focused group interviews and identification of the main blockages for school effectiveness. Among the documents analyzed were the school brochures that contain the history of the schools, their vision and mission statements, and philosophy and objectives, schools' curricular offerings, organizational structures, school publications and operations manuals, and the minutes of the meetings. On the other hand, seven dimensions or key result areas for parish schools were used in the analysis of the schools' culture: (a) adherence to Catholic characteristics; (b) organizational structure; (c) governance; (d) curriculum and instruction; (e) human resources; (f) physical and financial management; and (g) community support.

2. Identifying possible strategic directions for organizational effectiveness. Given below is the framework for this study.

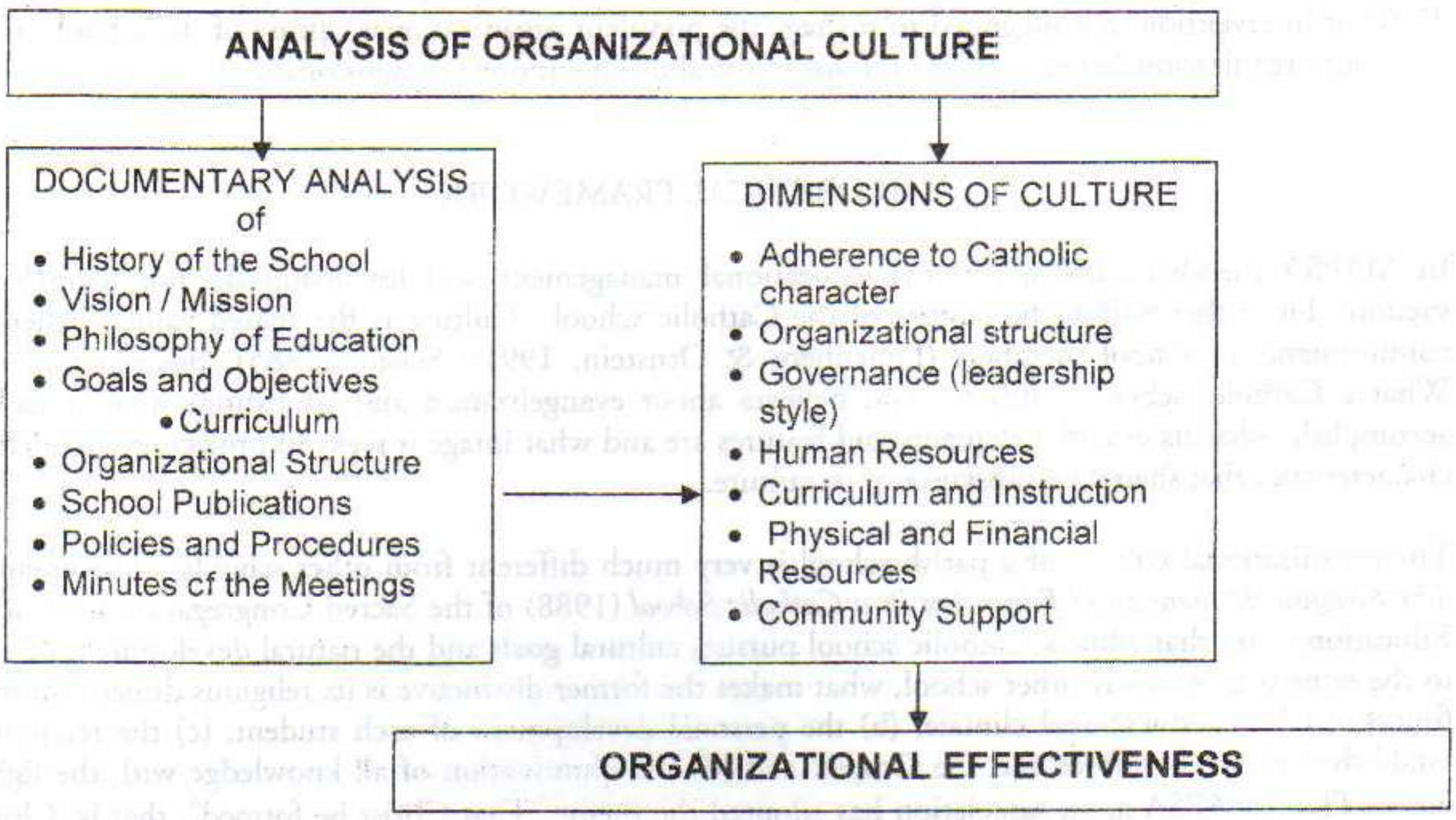


Figure 1. Theoretical framework

METHODOLOGY

The study was conducted using descriptive, comparative, qualitative research method. Documentary analysis, questionnaires, interviews and focused group discussions were employed in the conduct of study.

FINDINGS OF THE STUDY

The analysis of the organizational culture of MAPSA reveals the strengths and weaknesses of the organization. Since culture influences the work environment, the strengths should be upheld and improved while the weaknesses should be managed for organizational effectiveness by drawing out strategic directions (Borromeo, 1993) for the association. The strategic directions were drawn from the results of the focused group discussions and review of the action plans previously drawn by the schools. In addition, the experience of the researcher as school administration was used.

The following are the findings of this study:

1. The parish schools' organizational culture:

1.1 Adherence to the characteristics of Catholic education: In general, parish schools adhere to the characteristics of Catholic education. They have strong evidences of being Catholic institutions based on the rites, rituals and symbols that are present in the schools. They are located within the compounds of the parishes and serve as extensions of the local church, performing the task of education and evangelization. However, there is little evidence of a unified religious education curriculum and instructional objectives that require knowledge of the tenets of the Catholic faith. Likewise, there is little evidence of personnel's understanding of the meaning of Catholic religion as only about 15 percent of the teachers employed by respondent schools went to Catholic schools (either in grade school, high school, or college). There is a need to strengthen

religion as the core of the curriculum and to increase the participation of all members of the schools in outreach and civic activities for the poor.

1.2 Organizational structure

Respondent schools have organizational structure, with the local school Board of Trustees as the highest governing body. The chairman of the Boards is the Superintendent of Schools. The school heads, called Directors, are also members of Manila clergy who have assignments in their respective parishes. Their "physical presence" in schools is not always expected everyday of the week. The academic activities of the schools are handled by the school principals who are full-time administrators of schools. On the other hand, one weakness of the organizational structure of the schools is the failure of the Boards of Trustees to hold regular meetings four times a year as the common practice is to hold the board meetings only once a year, a practice which delays the approval of the annual school budgets and the approval of the appointments for administrative positions for the coming school year. Another weakness is the membership in the boards, usually limited to priests who sit in the same Boards. There is a need to expand the membership in the school Boards.

1.3 Governance

Governance is very hierarchal as practiced by the Church. However, the school directors employ participative and consultative management styles. Administrative Council meetings are held monthly to discuss the important concerns of the school. School policies and procedures are spelled out in the Faculty and Administrative Manuals and Student Handbooks and their provisions are strictly implemented. One weakness noted is the lack of "culture of documentation" among schools as most of the proceedings of the meetings are not documented. Announcements and information are disseminated through memoranda and letters/bulletins. Communication to parents is done through student's diaries/assignment notebooks or phone calls. Decision making process needs to be improved. While lay administrators are empowered, many decisions involving student and faculty affairs are left to the hands of the Directors.

1.4 Human Resources

The policies and procedures on hiring, retention and termination of school personnel are spelled out in Administrative and Faculty Manuals. The schools hire Catholics only in both teaching and nonteaching positions. Faculty members are not given permanency unless they pass the Licensure Examination for Teachers and show good performance and commitment to the schools. All schools adopt single salary scale. They give benefits more than what the law requires. Meanwhile, the following weaknesses were observed: not all guidance counselors and librarians are educationally qualified; a number of nonteaching personnel do not have college degrees; and not all schools have written personnel development program. While most of the parish schools offer financial assistance for enrollment in graduate studies, there are few takers among the faculty.

1.5 Curriculum and Instruction

The goals and objectives of education for preschool, grade school and high school are anchored on the goals and objectives set by the Department of Education. The mission statement of each school captures the general objectives of the respondent schools. While the schools adapt the Revised Basic Education Curriculum (RBEC), the emphasis on religion as the core of curriculum is evident, as religion is mandated to be integrated in the all subject-areas. The schools use their core values in identifying the attributes of an ideal graduate. They have low student-teacher ratio; emphasize transformative education issues such as gender equality, justice and peace, engaged citizenship and care for the environment in the lessons; and offer varied clubs and organizations

for students. However, the following weaknesses were noted: lack of options to measure student progress; lack of facility of the students to speak in English; difficulty of Gospel values integration in content subjects; too many subject preparations for small schools; lack of mechanism to address the needs of slow learners.

1.6 Physical and financial resources

Majority of the schools' offices and classrooms are well-ventilated and air-conditioned, which, according to the observation of teachers, minimize the noise and discipline problems among students while classes are going on. The schools' physical plant and facilities are well-maintained, repaired, and renovated regularly. Campuses are clean, observe waste segregation, and are child-friendly and safe. Students are not allowed to leave the campus during lunch breaks and recess periods. The weaknesses included: the schools' lack of master development plan for physical facilities; and the lack of regular audit of the schools' material and financial resources.

1.7 Community Support

This is one weak dimension of the parish schools, as if these schools have to be a resource for God and Nation, there is a need to improve the linkage among the stakeholders of the schools – the parish, their parents, and alumni.

2. Using the results of focused group discussions, review of the action plans of schools and the experience of the researcher as school administrator, 15 strategic directions were proposed for parish schools to undertake to ensure organizational effectiveness of schools, individually and collectively:

2.1 Adherence to the characteristics of Catholic education

2.1.1 Parish schools will create a Christian community that participates in the life of the Church and committed to practicing their faith through prayer and liturgy.

2.1.2 They will develop a unified religious education curriculum (to emphasize that religion is the core of the curriculum) that integrates the Apostolic Vision of the Archdiocese of Manila.

2.1.3 They will engage the schools to become resource for the Church and Nation through active involvement in programs for the poorest of the poor.

2.2 Organizational structure

2.2.1 Parish schools will evolve a working Board of Trustees that meets regularly.

2.2.2 They will expand the membership of the Boards to include lay persons.

2.3 Governance

2.3.1 Parish schools will build a culture of achievement where responsibility and accountability are embedded in the school systems and operations.

2.3.2 They will practice a management style that emphasizes open communication and participative decision-making.

2.4 Human resources

2.4.1 Parish schools will develop performance framework for personal, professional, and spiritual formation of personnel.

2.4.2 They will develop a comprehensive performance development program that includes pursuance of advance graduate degrees.

2.4.3 They will employ personnel that are educationally and professionally qualified.

2.5 Curriculum and instruction

2.5.1 Parish schools will develop a student-centered learning environment and unified curriculum framework that integrates the Gospel values and focuses on the developmental needs of students.

2.5.2 They will provide mechanisms for the improvement of the communication skills of students.

2.6 Physical and financial resources

2.6.1 Parish schools will provide school facilities and equipment that cater to the varied educational needs of students.

2.6.2 They will create a culture of transparency and accountability in managing its resources.

2.7 Community support

2.7.1 Parish schools will intensify their partnership with the parish, the alumni and the parents.

CONCLUSION AND RECOMMENDATIONS

Schools as organizations need to address the many challenges they face. This means they must be ready to face the changes that they have to undertake to achieve organizational effectiveness. An assessment of the organizational culture is one main responsibility of school administrators to enable their institutions to identify their strengths and weaknesses in order to draw strategic directions for improvement of the individual schools in particular and of parish schools in general. These strategic directions may be perceived as standards for school managers in engaging its members to work together for organizational effectiveness.

Since MAPSA also includes schools that offer tertiary education, this study recommends that the same study be conducted for the two colleges in the Archdiocese of Manila, one college in the Diocese of Pasig and three colleges of the Diocese of Antipolo, as these two dioceses were formerly part of the MAPSA school system, in order to validate the results of this study.

REFERENCES

Borromeo, R. (1993). *Strategies for effective school management.* Quezon City: Phoenix Publishing House, Inc.

Javierre-Ortas, A. & Baum, W. (1988). *The religious dimension of Catholic education* (notes from the Sacred Congregation for Catholic Education).

Lunenberg, F. & Ornstein, A. (1991). *Educational administration: Concepts and principles.* USA: Wadsworth, Inc.

Parker, M. (2000). *Organizational culture and identity.* London: Sage

Schein, E. (1985). *Organizational culture and leadership.*, San Francisco: Josey-Bass.

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A COMPARISON OF THE QUALITIES OF THE TWO-OPTION MULTIPLE CHOICE AND TRUE-FALSE VOCABULARY

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ABSTRACT

The purposes of this research investigation were to compare the reliability index, the difficulty index, the discrimination index and the arithmetic mean of the two-option multiple choice and true-false vocabulary tests. The sample was comprised of 564 Mathayom Sueksa 3 students enrolled in secondary school under the jurisdiction of Bangkok Educational Service Area Office 2 in the academic year 2009. These students were divided into three groups and were randomly assigned either a two-option multiple choice vocabulary test or one of two comparably written true-false vocabulary tests. The instruments of research were the three vocabulary tests. These three tests had the same questions item by item. Results indicated that the reliability index, the difficulty index, and the arithmetic mean of the three tests were significantly different, while the discrimination indices of the three tests were not significantly different.

Keywords: Two-option multiple choice, true-false vocabulary test, secondary students, reliability index, difficulty index, arithmetic index

INTRODUCTION

The value of educational measurement indubitably depends on the educational instrument used for measurement. If an educational instrument is of high quality, the results of educational measurement will be correct and will correspond to the real educational situation. In contrast, if the educational instrument lacks quality, it cannot be used to measure the abilities of learners correctly. Specialized jobs require suitable instruments, more specifically, a measuring instrument; for example, just as a doctor needs a sphygmomanometer, thermometer, and stethoscope and a carpenter needs a tape measure, so does a teacher need a measuring instrument (Amornrattanasak, 2001).Tests are well-known instruments for teachers. However, tests cannot be directly used as scientific measuring instruments.

Multiple choice tests are the most popular educational instruments (Anastasi, 1976). The strength of these tests lies in the fact that their very flexibility allows them to exhibit selectivity, objectivity, fairness, and comprehensiveness. Moreover, they can be used for testing large numbers of students at the same time. In addition, they can be quickly graded or marked. A problem of constructing and tests is how to develop options, especially those involving false options which are intended to mislead those who are insufficiently knowledgeable. It is difficult to construct good false options for multiple choice tests and to do so require a long period of preparation. An alternative is to construct a test with fewer options as responses in multiple choice tests. Another alternative is to construct true-false tests, inasmuch as they obviate the time-consuming task of generating multiple false options. However, in this case, the probability of answering correctly increases simply because of the operations of chance. So, how can we know whether the two-option multiple choice test, the three-option multiple choice test, or the true-false test are as valid as multiple choice tests with four or five options?

For this reason, some educational psychometricians are interested in determining how many options are required for a good test and how differences in the number of options affect test quality. Some authorities suggest that there should be four or five options, with Mehrens and Lehmann (1984) suggesting three to five options. Thorndike (1971) said that the more options there are, the higher is the level of reliability. Because of this problem, the question "How many options should there be in a high quality test?" becomes a topic of investigation for researchers in the field. To study such a problem, a promising technique is to construct a test with the same questions, item by item, but with differing numbers of options: three, four, or five options and then actually test students. Subsequently, their corresponding levels of reliability, validity, item difficulty, and discriminatory power can be effectively compared.

In the empirical studies of Budescu and Nevo (1985), Ramos and Sterns (1973), and Kendall (1964), it was found that the more options there are, the more reliable is a test. Moreover, Green, Sax, and Michael (1982) found that the four-option multiple choice test bears the highest level of reliability, especially for students whose ability is average or below average. Trevisan, Sax, and Michael (1991), Straton and Catts (1980), and Costin (1972) determined that the reliability of the three-option multiple choice test is higher than the two-, four- and five- option multiple choice tests. Similar results were obtained by Lord (1977), Grier (1975), Ebel (1969), and Tversky (1964) who accordingly suggested that the highest level of reliability was obtained with three-option multiple choice tests.

In comparing test quality, Tversky (1964) has suggested that the tests being compared should be the same size. The size in this case is calculated by multiplying the number of items by the number of options. For example, a test with 30 items and 2 options for each item can be compared with a test with 20 items and 3 options for each item because the result from multiplying all the items by the options in both tests would be 60. Moreover, Tversky suggested that the time students spent in completing the tests may differ if the tests have an equal number of items but a different number of options. Tversky suggested that a way to solve this problem of time disparity would be to utilize different tests of the same size as measured by multiplying all items by all options.

Grier (1975) studied this problem through an application of Tversky's technique. The study shows that the three-option multiple choice test will have the highest level of reliability when the time students spend reading the options is greater than the time spent reading the stems. However, Grier found that, in general, this is not actually true. So, in 1976, Grier suggested a new technique in approaching this problem by combining the time students spent in reading and considering both stems and options in the allotted period of time. This can be expressed in an algebraic equation as given below:

$$T' = nt' + \sum_{i=1}^{n} a_i t$$

if T' = is the allotted time
n = is the number of stems for each test
t' = is the time the students spend in reading and considering each stem
t = is the time the students spend in reading and considering each option
a_i = is the number of options per stem

If for each alternative test, the number of options in each item is equal (a), then the result would be:

$$T' = nt' + nat$$

If we let m be the ratio between the time spent in reading and considering stems and reading and considering options, then the result would be:

$$m = \frac{t'}{t}$$

Thus $T' = n(a + m)t$

The methods of Tversky and Grier are more complex than this in actual practice. So, to solve the problem of pairing equally allotted periods of time with tests having different numbers of options, the researcher suggests that it is better to compare the quality of a two-option multiple choice test and a true-false test in order to avoid the difficulty of having to allot a fixed time for testing. For this reason, the qualities of the two-option multiple choice and true-false vocabulary tests are compared, especially in regard to their reliability, item difficulty, and discriminatory power. Once arithmetic means are computed, and then an analysis can be conducted ascertaining which format evinces the highest quality.

METHODOLOGY

The sample was comprised of 564 Mathayom Sueksa 3 students enrolled in secondary school under the jurisdiction of Bangkok Educational Service Area Office 2 in the academic year 2009. These students were divided into three groups and were randomly assigned either a two-option multiple choice vocabulary test or one of two comparably written true-false vocabulary tests. The number of students taking each of these three test forms was 190, 188 and 186, respectively. The instruments of research were three vocabulary tests which had the same questions item by item. Only a two-option multiple choice test was constructed. It was tried out and its reliability level was determined by means of an application of the Kuder-Richardson formula *20 (K – R 20)*. It was found that the level of reliability of this test is 0.78. After being tried out, the test was applied on the basis of three formats: the two-option multiple choice format, the true-false format 1 (using the first option of the two-option multiple choice test as the meaning of the stem), and the true-false format 2 (using the second option of the two-option multiple choice test to be the meaning of the stem).

RESULTS

The first hypothesis – the reliability indices of the three tests are significantly different - was tested using Chi-square (X^2) test. It was found that the reliability indices of the three tests were significantly different statistically ($p < .05$). Therefore, Fisher's Z test was applied to determine the differences between the two groups to test reliability. It was revealed that the two-option multiple choice format provided a significantly more reliable measure than the true-false format 1. These results are shown in Tables 1 and 2.

Table 1
The Results of the Chi-square Test to Determine the Differences Between the Reliability Indices of the Three Tests

Test	N	N-3	r_{tt}	Z	$(N-3)Z$	$(N-3)Z^2$	χ^2
Test 1	190	187	.866	1.317	246.279	324.349	6.57*
Test 2	188	185	.788	1.066	197.210	210.226	
Test 3	186	183	.806	1.116	204.228	227.918	
Total	564	555			647.717	762.493	

*$p < .05$

Table 2
Fisher's Z Significant Difference Test of the Reliability of the Tests

Tests	Z	Test 1	Test 3	Test 2
Test 1	1.317	1.317	1.116	1.066
Test 3	1.116	-	0.201	0.251*
Test 2	1.066		-	0.050

*$p < .05$

One-way analysis of variance (ANOVA) was used to test the second hypothesis, *viz.*, the difficulty indices of the three tests are significantly different. The result indicated that the difficulty indices of the three tests were significantly different, statistically ($p < .05$). Since the difference was statistically significant, Scheffé's test was used to determine the differences between the two population means. It was revealed that the two-option multiple choice format was significantly easier than the true-false format 1. These results are shown in Tables 3 and 4.

Table 3
One-way ANOVA Testing the Differences Between the Difficulty Indices for the Three Tests

Source of variation	SS	*Df*	MS	*F*
Between groups	5.068	2	2.534	3.510*
Within groups	84.475	117	.722	
Total	89.543	119		

*$p < .05$

Table 4
Results of Scheffé's Test to Determine the Differences Between the Two Population Means

Test	$\bar{\Delta}$	Test 2	Test 3	Test 1
Test 2	11.3	11.3	11.2	10.8
Test 3	11.2	-	0.1	0.5*
Test 1	10.8		-	0.4

*$p < .05$

The third hypothesis that the discrimination indices of the three tests are significantly different was tested by using the X^2 test. It was found that the discrimination indices for the three tests were not significantly different, statistically ($p > .05$). These results are shown in Table 5.

Table 5
Chi-square Test Results to Determine the Differences Between the Discrimination Indices of the Three Tests

Test	N	N-3	$\bar{r}$	Z_r	$(N-3)Z_r$	$(N-3)Z_r^2$	χ^2
Test 1	190	187	.48	.52	97.24	50.56	0.71
Test 2	188	185	.41	.44	81.40	35.82	
Test 3	186	183	.42	.45	82.35	37.06	
Total	564	555			260.99	123.44	

Finally, the analysis of variance (ANOVA) technique and Scheffé's test were applied to test the fourth hypothesis, that the arithmetic means of the three tests are significantly different. The result indicated that the arithmetic means for the three tests were significantly different at the .05 level. The results of Scheffé's

test revealed that the arithmetic mean on the two-option multiple choice test was significantly higher than that of the true-false format 1. These results are shown in Tables 6 and 7.

Table 6
One-way ANOVA for Testing the Differences Between the Arithmetic Means of the Three Tests

Source of variation	SS	df	MS	*F*
Between groups	379.258	2	189.629	4.236*
Within groups	25111.629	561	44.762	
Total	25490.887	563		

*$p < .05$

Table 7
The Results of Scheffé's Test for Determining the Differences Between Two Population Means

Test	$\bar{x}$	Test 1	Test 3	Test 2
Test 1	27.62	27.62	26.10	25.72
Test 3	26.10	-	1.52	1.90*
Test 2	25.72		-	0.38

*$p < .05$

DISCUSSION

The reliability levels of the three tests were significantly different, statistically at the .05 level. The reliability of the two-option multiple choice test is significantly higher, statistically, than the true-false test format 1 at the .05 level. This finding is congruent with the hypothesis and the research results of Hancock (1993), which involved comparing the reliability indices of the two-option multiple choice test and the true-false test. The research results of Hancock show that the reliability of the two-option multiple choice test is at the highest level, while concomitantly the true-false test is at the lowest level.

The difficulty levels of the three tests were significantly different at the .05 level. The two-option multiple choice test was significantly easier ($p < .05$) than the true-false test format 1. The reason why the two-option multiple choice is easier than the true-false test is that there are two options for each stem of the two-option multiple choice test. Although the students may not know the meaning of the vocabulary items given to them, they can eliminate the false option which they know must be certainly wrong and they will instead select the other option. That is why the students are marked correct for such an item of vocabulary even though they do not know with certitude its meaning. In contrast, only students who have adequate knowledge can select the correct responses on a true-false test. They have to know the meanings of the items and, thus be able to choose which items are true and which are false before they respond. In this case, the students cannot rely on imperfect knowledge so as to eliminate options and then be able to select the remaining option on a two-option multiple choice test. So, the true-false test is more difficult than the two-option multiple choice test.

The discriminatory power for the three tests was not significantly different ($p > .05$). This finding is incongruent with the hypothesis because the levels of difficulty of the two-option multiple choice test and the true-false test are not so great. The level of difficulty is in the approximate range of 0.55 to 0.80. As the probability of being correct through guessing on the two-option multiple choice test and the true-false test is 0.50, the corresponding level of difficulty would be greater than 0.50. So, if the students answer questions through guessing, the difficulty of each item would surely be about 0.50. But, if there are some

students who do not answer just by guessing, the difficulty level would be greater than 0.50. As a result, the discriminatory power of the three tests cannot be statistically significantly different at the .05 level.

The arithmetic means of the three tests were significantly different statistically at the .05 level. The arithmetic mean of the two-option multiple choice test was higher than the true-false test format 1 at the .05 level. This finding is congruent with the hypothesis and the research results of Hancock (1993), who found that the arithmetic mean of the two-option multiple choice test was statistically significantly higher than the true-false test format 1 and format 2 at the level of 0.05.

REFERENCES

Amornrattanasak, S. (2001). *Test theory*. Bangkok: Ramkhamhaeng University Press.

Anastasi, A. (1976). *Psychological testing* (4th ed.). New York : Macmillan.

Budescu, D. V., & Nevo, B. (1985). Optimal number of options: An investigation of the assumption of proportionality. *Journal of Educational Measurement, 22*, 183-196.

Costin, F. (1972). Three-choice versus four-choice items: Implications for reliability and validity of objective achievement tests. *Educational and Psychological Measurement, 32*, 1035-1038.

Ebel, R. L. (1969). Expected reliability as a function of choice per item. *Educational and Psychological Measurement, 29*, 565-570.

Green, K., Sax, G., & Michael, W. B. (1982). Validity and reliability of tests having differing numbers of options for students of differing levels of ability. *Educational and Psychological Measurement, 42*(1), 239-245.

Grier, J. B. (1975). The number of alternatives for optimum test reliability. Journal of *Educational Measurement, 12*, 109-113.

Hancock, G. R. & others. (1993). Reliability of comparably written two-option multiple-choice and true-false test items. *Educational and Psychological Measurement, 53*, 651-660.

Kendall, L. M. (1964). The effects of varying time limits on test validity. *Educational and Psychological Measurement, 24*, 789-798.

Lord, F. M. (1977). Optimal number of choices per item- a comparison of four approaches. *Journal of Educational Measurement, 14*(1), 33-38.

Mehrens, W. A., & Lehman, I. J. (1984). *Measurement and evaluation in education and psychology* (3rd ed.). Tokyo: Holt-Saunders.

Ramos, R. A., & Stern, J. (1973). Item behavior associated with changes in the number of alternatives in multiple-choice items. *Journal of Educational Measurement, 10*, 305-310.

Straton, R. G., & Catts, R. M. (1980). A comparison of two, three and four choice item tests given a fixed total number of choices. *Educational and Psychological Measurement, 40*, 357-365.

Thorndike, R. L. (1971). *Educational measurement* (2nd ed.). Washington DC: American Council on Education.

Trevisan, M. S., Sax, G., & Michael, W. B. (1991). The effects of the number of options per item and student ability on test validity and reliability. *Educational and Psychological Measurement, 51*, 829-837.

Tversky, A. (1964). An optimal number of alternatives of a choice point. *Journal of Mathematical Psychology, 1*, 386-391.

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COMMUNICATION CONDITIONS OF THE PERSONNEL OF RAMKHAMHAENG UNIVERSITY

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ABSTRACT

The purposes of this research were: to investigate conditions and problems regarding communications among personnel at Ramkhamhaeng University; to compare the conditions and problems in communication among personnel categorized by age, gender, position, educational level and working experiences and; to elicit the personnel's suggestion regarding methods to improve communication. A sample of 275 personnel was selected by means of quota sampling. A five-point rating scale questionnaire was used in order to collect data. Percentage, mean, standard deviation, *t* test and one-way ANOVA were used to analyze the data. The results of this research were that: (1) the personnel at Ramkhamhaeng University, in general, moderately utilized communication channel and exhibited moderate level of communication behaviors; (2) significant differences were found in communication conditions of the personnel who in terms of educational level but no significant differences were found among those of different age, gender, position and working experiences; (3) personnel reported moderate level of problems on communication; and (4) no significant differences were found in communication problems of the personnel who differed in age, gender, position, educational level and working experiences.

Keywords: Communication, university personnel

INTRODUCTION

Communication is an important element for creating mutual understanding among individuals and groups in organizations so that they could develop accurate understanding regarding several issues including organizational objectives. In private and public organizations alike, communication helps to keep employees updated about their job requirements. Without proper communication, planning, commanding, job assignment, and cooperation will be almost entirely impossible. Communication in organizations serves four functions, namely, control, motivation, emotional expression, and information (Scott & Mitchell, 1976).

Communication is a medium through which an individual's need, thought, and feelings are conveyed to others. As a result, mutual understanding can be created among individuals, groups, or organizations which lead to the enhancement of operations towards an organization's goals. Schermerhorn, Hunt, and Osborn (1995) defined organizational communication as a process through which information is exchanged so as to create mutual understanding. The exchange of information through organizational communication may take place formally or formally.

As a linkage medium and a motivation force in the organization, communication is a critical tool for managers in supervising their work. This is because communication conveys an organization's plan and policy from top management to subordinates. If communication can generate mutual understanding, it will lead to work efficiency, and vice versa.

Therefore, communication is an important tool for the success of organizational operations since it is an underlying force for job management, organizational planning, and work control. Moreover, communication will lead to positive relationships between superiors and subordinates, management efficiency, superior's vision and morality, subordinates' self-improvement, and solidarity in the organization. All in all, communication helps employees understand their own role, organizational goals and policy, as well as understanding of approach to success and problems in organization. As for Ramkhamhaeng University, communication is an essential tool to convey needs, thoughts, and feelings among individuals and groups to achieve mutual understanding. Effective communication would eventually result in efficient work operations and responsiveness to the goals of Ramkhamhaeng University.

Ramkhamhaeng University was founded in 1971 in the 300 rai area at Huamark, Bangkapi, Bangkok. This campus encompasses all schools, offices, and centers, as well as a center for teaching and management. In addition to the Huamark campus, Ramkhamhaeng University also has the Bangna campus, founded in 1979 and located at 150-rai donated plots of land alongside Bangna-Trad Road, and 20 academic service centers throughout the country (Ramkhamhaeng University, 2007). The second campus was established in Bangna district of Samutprakarn Province, a suburb of Bangkok. While the Bangna campus houses the classes for freshmen, Huamark campus offers classes for sophomores and higher classes of all undergraduate majors as well as graduate students (Master's and doctoral levels). All kinds of university's activities (e.g. commencement ceremony) take place here.

In order to link all campuses and centers efficiently, effective communication between and among personnel is required. At present, the personnel of Ramkhamhaeng University are encountering communication problems due to its scattering and dynamic workplaces. Socialization among personnel is obstructed and organizational communication is scarce, especially among the centers and campuses. Realizing the significant function of communication in rendering effective work management, this research, therefore, was conducted to determine the communication conditions and problems among the personnel at Ramkhamhaeng University, and to improve the efficiency of communication system within the University. In addition, the conditions and problems in communication of personnel were compared by age, gender, position, educational level and working experiences.

RELATED LITERATURE

Communication process. Robbins and Judge (2009, p. 378) concluded that communication process consists of eight parts, namely; the sender, encoding, the message, channel, decoding, receiver, noise, and (8) feedback. Organizational communication is the special process through which information moves and is exchanged throughout an organization. Information flows through both formal and informal channels and it flows downward, upward, and laterally.

Organizational communication: Robbins and Judge (2009) asserted that organization members communicate in both formal small-group network patterns and the grapevine. Formal small-group network is characterized by the patterns similar to a (a) "chain" wherein information is transmitted via each member of the group to the next; (b) "wheel", wherein a member is the center to receive incoming information and transmit it to

other members; and (c) "all-channel", wherein the transmissions of information occur among all members with another.

The grapevine is the informal communication network in a group or organization. (Elias, 2009). The grapevine has three main characteristics. First, it is not controlled by management. Second, most employees perceive it as more believable and reliable than formal communiqués issued by top management. Lastly, it is largely used to serve the interests of the people within it (Pfeffer, 1992). Moreover, there are also other means of communication such as electronic communications which include e-mail, text messaging, networking software, blogs, and video conferencing.

Methods of communication: Moorhead and Griffin (1998, p. 259) divided method of communication into three types: written, oral, and nonverbal communication which are the most prevalent and effective methods of communication.

Communication barriers: Schermerhorn, Hunt, and Osborn (2007, p. 330-331) identified the following barriers to effective communication: physical distractions, semantic problems, mixed messages, and absence of feedback. Robbins and Judge (2009, p. 393) concluded the critical barriers to communication as follows: filtering, selective perception, information overload, and emotions. Perfect communication is difficult to attain. Yet, a positive relationship exists between effective communication (which includes perceived trust, perceived accuracy, desire for interaction, top-management receptiveness, and upward information requirement) and worker productivity (Garst, Frese, & Molennaar, 2000).

Objectives of the Study

The objectives of this study were:

1. To investigate communication conditions of personnel at Ramkhamhaeng University;
2. To compare the conditions in communication among personnel at Ramkhamhaeng University categorized by age, gender, position, educational level and working experiences;
3. To investigate communication problems among the personnel at Ramkhamhaeng University;
4. To compare the problems in communication reported by personnel at Ramkhamhaeng University categorized by age, gender, position, educational level and working experiences; and
5. To elicit the personnel's suggestions regarding methods to improve communication.

METHODOLOGY

Population and sample. The population of this study consists of 826 faculty members of eight schools of Ramkhamhaeng University: Law, Business Administration, Humanities, Education, Science, Political Science, Economics, and Engineering. The sample was selected at 95 percent confidence (with 5% error) using the quota sampling method with equal numbers in eight schools. The total number of respondents was 275.

Instrument. A questionnaire was used which consists of three parts. The first part elicited demographic information of the subjects, while the second part was a five-point rating scale asking about their conditions and problems in communication. The last part asked for suggestions regarding methods to enhance communication in the organization.

Data collection and analysis. The questionnaires were distributed personally and collected from the selected respondents. The data were then inputted in a statistical computer package and analyzed using percentage, frequency, arithmetic mean, and standard deviation. The inferential statistics used included *t*-

test and Analysis of Variance (ANOVA) with post hoc analysis using procedure suggested by Scheffé (Levine, Stephan, Krehbiel, & Berenson, 2005).

FINDINGS AND DISCUSSION

The first objective aimed to investigate conditions and problems in communication of personnel at Ramkhamhaeng University. The findings revealed that communication conditions of the personnel at Ramkhamhaeng University were at a moderate level regarding communication channel and communication behavior. This may be due to the fact that the communication patterns in Ramkhamhaeng University were quite diverse; hence, personnel who faced difficulty in communication turned to rely on grape vine or informal communication in workplace. Casual conversations with colleagues and superiors were the most prevalent form of communication since it was personal and quite open for any types of inquiries. In addition, trust in the communication partner is the key to effective communication.

Regarding communication channel, it was revealed that the communication conditions of the personnel of Ramkhamhaeng University are in the moderate level in all aspects. However, the highest mean was found with "conversation with colleagues and superiors" which was an informal communication channel. The aforementioned finding may stem from the fact that the personnel of Ramkhamhaeng University was usually loaded with arduous tasks (e.g. traveling to 20 academic centers around the country). As a result, two-way, oral communication with their superiors was considered the fastest and the most convenient, especially when they had urgent inquiries and need immediate responses. In this matter, oral communication between superior and subordinate would generate clear information regarding organization policy and operational plan. Moreover, oral communication could convey personal touch in terms of feeling and nonverbal messages of the communicators. The finding coincided with the study of Moorhead and Griffin's (1998) which concluded that oral communication was the prevalent method of communication to convey information from one person to the other in organizations.

Regarding communication behavior, it was revealed that personnel exhibited a moderate level of communication behaviors. The behaviors that received the highest means were "conversation with colleagues" and "reading internal memo from superiors". This might be due to the fact that the faculty members had high loads of teaching as well as traveling to the academic centers in the country. Therefore, they had quite a little time for communication. As a result, they employed various methods of communication: formal and informal-depending on communication environment and availability of appropriate communication technology. Therefore, conversation with their colleagues in the same hierarchical level was considered the most proper behavior for generating positive relationship with colleagues. According to Moorhead and Griffin (1998), positive relationship among colleagues was the critical factor for successful working condition.

Personnel also identified that oral communication in the form of informal communication was used most often in organization, such as in work process, group meeting, and so on. According to Robbins (1996), oral communication can convey a variety of signs, e.g. wording, voice, posture, movement, and expression. Immediate feedback and corrections are also possible with oral communication.

The second objective aimed to compare the conditions and problems in communication of personnel categorized by age, gender, position, educational level and working experiences. Significant differences were found in communication conditions of the personnel in terms of educational level but no significant differences were found among those who differed in age, gender, position, and working experiences.

The above findings may stem from the fact that the personnel of Ramkhamhaeng University, males and females, shared similar tasks and job responsibility and conditions. As a result, both genders did not express significant differences regarding their communication conditions.

The nonsignificant differences were also found among the personnel of different age levels. This may be due to the fact that units at Ramkhamhaeng University share similar organizational structure, policy, nature, and work operation. As a result, the personnel's communication channel and behaviors remained similar among the personnel of all age groups.

The only significant difference was found among the personnel of different educational levels in both communication channels and behaviors. This may be due to the fact that the personnel of different education levels were capable of and accustomed to different communication channels and behaviors, in order to correspond to their different needs for effective communication.

The third objective aimed to determine communication problems in operation among the personnel at Ramkhamhaeng University. The findings revealed that the personnel had a moderate level of communication problems in operation. This may be due to the fact that Ramkhamhaeng University provided a variety of communication channels to be chosen as needed by the personnel to suit their environment and experiences.

The most frequent cited problem of communication concerned the internet connection. In this regard, weather conditions, humidity, and problematic phone system caused internet connection failure. Long lead-time used to connect through the Internet made personnel lost their interest in using the Internet.

The personnel also mentioned that most of the time they received internal memo too late, rendering their inability to complete the required mission in time. The delayed memo was caused by the red tape in circulating it via too many hierarchical lines of command. The problem was worse when the personnel were not working on campus.

The fourth objective was to compare the problems in communication of personnel at Ramkhamhaeng University by age, gender, position, educational level, and working experiences. The study revealed no significant difference regarding communication problems among personnel with different age, gender, position, educational level, and working experiences. This may be due to the fact that the personnel shared similar characteristics in terms of tasks and job responsibility, with limited time for communication.

Regarding the personnel's suggestions in communication, they asked for improved speed in sending and circulating internal memos, more communication devices with high quality in each unit (e.g. computers), meeting reports from superiors, reduced communication hierarchy using E-office, more channels for internal communication, e-mail address provided to all personnel, more posters in front of buildings and offices, more information sent via web site and internet, more clarity of language used in transmitted information, and measure to acknowledge information receipt.

RECOMMENDATIONS

The findings revealed that the personnel of Ramkhamhaeng University preferred oral communication to written or technological communication. To be more specific, they preferred conversations with colleagues and superiors. As a result, the University should hold a meeting, seminar or other related activities, to provide more opportunities for the personnel to acquire information directly from their superiors and to exchange information via face-to-face communication.

The personnel of Ramkhamhaeng University mentioned that they preferred not to use communication technology (especially Internet) due to the problem in Internet connection and inadequate devices. Hence, the University should provide more technological devices in each organizational unit and encourage the personnel to use modern technology in communication so as to generate high work performance.

Since the internal memos were usually circulated slowly and on a limited basis, they should also be used together with oral communication to confirm the sending and receiving process.

REFERENCES

Elias, S. M. (2009). Employee commitment in times of change: Assessing the importance of attitudes toward organizational change. *Journal of Management, 35*(1), 37.

Garst, H., Frese, M., & Molennaar, P. C. M. (2000). The temporal factor of change in stressor-strain relationships: A growth curve model on a longitudinal study in East Germany. *Journal of Applied Psychology*, p. 417.

Levine, M. D., Stephan, D., Krehbiel, C. T., & Berenson, L. M. (2005). *Statistics for managers using Microsoft Excel*. New Jersey: Pearson Prentice Hall.

Moorhead, G. & Griffin, R. W. (1998). *Organization behavior*. New York: Houghton Miffin Company.

Pfeffer, J. (1992). *Managing with power: Politics and influence in organizations*. Boston: Harvard Business School Press.

Ramkhamhaeng University (2007). *36 Years of Ramkhamhaeng University*. Bangkok: Ramkhamhaeng University Press.

Robbins, S. P., & Judge, T. A. (2007). *Organizational behavior*. New Jersey: Pearson Prentice Hall.

Schermerhorn, J. R., Hunt, J. G., & Osborn, R. N. (2007). *Organizational behavior*. New Jersey: John Wiley & Sons.

Scott, W. G. & Mitchell, T. R. (1976). *Organization theory: A structural and behavioral analysis*. Homewood, IL: Richard Irwin.

THE EXPERIENCE OF CONSCIENTIZATION IN SOCIOLOGY: A PHENOMENOLOGICAL INQUIRY

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ABSTRACT

Using phenomenological inquiry method, the study reveals that the students of sociology, after going through field studies with certain microsocieties, experienced conscientization: change of social orientation and intensification of personal and collective conviction. They articulated their feelings about sociological concepts like ethnocentrism, cultural relativism, and the paradoxes in the Philippine society. They internalized life and attitude values like education and respect. They acknowledged inner transformation and avowed individual advocacies geared towards poverty alleviation and human rights promotion, particularly concerning education for indigenous people, women emancipation, children's care and protection, and workers' just compensation. They expressed optimism to help reshape "unfavorable" sociocultural behaviors formed by miserable socioeconomic and a ruthless sociopolitical system. They aspired for establishing students' organization to undertake collaboration with government and nongovernment organizations and Church programs towards meaningful solidarity with the poor.

Keywords: Conscientization in sociology, phenomenological inquiry

CONTEXT

Learning process can either be depository or dialogical (Shor & Freire, 1987). In experiential learning (Casinto, 2009), learners are participants of interaction and discovery (Lucas & Corpuz, 2007) gaining meaningful learning (Corpuz & Salandanan, 2007). Sociology is highly an interactive subject (Palispis, 2008). It requires contact with the society because it deals with "facts about causes of human sufferings and conditions considered destructive to human lives" (Zulueta & Liwag, 2001). Using conscientization (Gregorio, 2009) as critical awareness of a social problem to action in resolving the problem, what personal and social realities can be revealed by the learners of sociology? Hence in this study, we determined the experience, learning, insight, and action of the study participants in learning sociology via field study involving document analysis, observation and interview. We substantiated the *learning* variable with the concepts and feelings articulated by study participants; *insight* with inner change, and advocacy; and *action* with their unified suggestions. In short, we study the experience of the students of sociology (study participants) who study the people in the microsociety (target participants).

PROCEDURE

We utilized qualitative-phenomenological method (Creswell, 1998) in discovering something about an observable event. We followed inquiry process – searching for the truth and information by means of asking relevant questions that go beyond knowledge and skills and towards achieving affective dimension like attitudes and values (Garcia, 2004). We used essay writing and written-response, observation, self-report and oral questioning technique (Santos, 2007). Our discourse follows the flow from veracity of experience of study participants to the explicit indicators of their awareness, transformation of self, and suggestions for action.

We were guided by Experiential Learning Theory (ELT) of Dewey, Lewin, and Piaget (Kolb et al., 1999), the Social Learning Theory (SLT) of Bandura (Vega & Prieto, 2006), the Phenomenological Perspective (Birion et al, 2008), and the Critical Theory (CT) of Frankfurt School (Morrow & Brown, 1994). ELT asserts that "experience is the basis for observations and reflections which is assimilated and distilled into abstract concepts from which new implications for actions can be drawn" (pp. 2-3), and that the things realized and understood can be utilized in creating new experience. According to Ng (2009), citing Kolb (1984), ELT emphasizes the effect of experience on learning and change, and that learning is a product of experience and concepts and observation to action. SLT emphasizes the effects of thought on behavior and action and vice versa (Hall et al., 1998, p. 591). Relating ELT with SLT gives one an idea how experience forms perceptions as cognitive element as well as action and aspiration as behavioral elements. Phenomenological perspective "stresses what experience serves to the individual as basis of human personality and behavior" (p. 144). Finally, Morrow and Brown (1994) disclosed that critical theory is linked with empirical research and social science methodology.

We made the students undergo an orientation activity on what sociology is and its specific main topics, why use field study strategy (Spradley, 1979), and how to go about it. We secured permission from school administration and we gave out the consent forms. We formed focus themes and sent each group to the field, collected, and analyzed their written reports about material, communicative, behavioral and cognitive cultures (Vega, 2006) among construction workers, orphans, child laborers, prostituted women, sick and health providers, people in justice hall, and the Badjaos. We observed and interrogated the study participants during their oral reporting, facilitated focus group discussions with members, randomly coming from the different focus themes. Then, we collected and analyzed their transcripts, using triangulation and following the innate character of phenomenological study (Creswell, 1998).

To ensure authenticity of findings, we allowed the study participants to express their respective experiences in the vernacular. We documented their discussions appropriately, upheld ethics by ensuring the proper content of the inform consent form that Creswell (1998) outlined. In the general presentation of the discourse, we dealt on rhetorical and methodological approaches or giving emphasis on the language and process of research (Creswell, 1998). We ensured that the literary set-up is captivating and most importantly, an authentic expression of experiences, thus we used the *personal voice* and *qualitative terms* with limited and simple definitions. Likewise, we utilized inductive logic, studied the topic within the context of the study participants, and became flexible to the emerging literary structure.

RESULTS

Bulk and Veracity of Experiences

The study participants experienced how injustice and poverty shape perception and behavior of people – such as those who succumbed to destitution tend to cling to anything in order to survive. The study

participants encountered paradoxes like the Philippines having signed an international agreement about the rights of children, but its agencies seemed blind about the growing number of child laborers. Poor children are defenseless and vulnerable but overburdened. Street children are rampant but unnoticed. The poor people work more but are paid less, are often humiliated but always find good in others, have no possession but are contented in life, devoid of material frills but are clothed with hospitality. The prostituted women act cheerfully, but long to be freed from their situation, seem strong but silently cry for understanding, give up spiritual dignity just to survive physically. They are considered immoral and illegal but are required to register in the government health agency. The construction workers can afford to give so much energy but cannot afford to buy nutritious food. They construct buildings but have no house of their own. They are considered strength of the nation but are not fed well.

Zulueta and Liwag (2001) disclosed that "some 3.6 million children aged 5 to 17 are already working in the fields, inside factories, along the streets, and in mining and quarrying sites. In other words, 3 of 20 Filipino children you meet are already working. Some 60 percent of them are exposed to a variety of hazards ranging from physical, biological, and chemical". Salcedo et al. (1999; p. 58) said that "children of the poor are severely disadvantaged in terms of health, nutrition, emotional growth and educational opportunities. At an early age, they are already required to help support the family and are, thus, exposed to objectionable and sometimes illegal and immoral influences. Many young girls must marry early or work as domestic helper, waitresses or entertainers in bars and restaurants to help support the family".

The observation of study participants with mental patients conformed to Salcedo's contention that "there are more men in the mental hospital with ratio of 10:1". The study participants said that those admitted in the mental hospitals are commonly coming from poor families who suffered hunger, depression, and discouragement, affirming what Zulueta and Liwag (2001) said that "one of the devastating psychological effects of poverty on individuals is lack of self-esteem and alienation from the society," Thus, poverty as cause of mentally illness is not a remote idea.

In their encounter with the Badjaos, the study participants realized that there is integrity in cultural solidarity. They feel the need to understand and know their situation and to be in solidarity with their aspirations and struggles. According to Gregorio (2009), cultural solidarity as social condition creates oneness of people despite their diverse cultural and religious backgrounds. It ensures understanding and calls for unity of tri-peoples.

Having been exposed to the miserable condition of the construction workers, the study participants felt disappointed with the government because, though it proclaimed that growth can be achieved through employment, it welcomed foreign investors and asked the workers to sacrifice just to attain this growth. This sacrifice is further confirmed by what Zulueta and Liwag (2001) said, that "the government called for a strike ban, a moratorium of Collective Bargaining Agreement (CBA) negotiations, and wage freeze".

The study participants had sized up the impact of poverty by asserting that poor children are too young to suffer, too early to mature and too soon to die, and by recalling how a prostituted woman was forced by her live-in partner to have sex with someone else just to earn for the day. Salcedo et al. (1999) explained this phenomenon when he said that "unemployment and underemployment are two factors that have affected family income and have resulted in changes in the traditional structure of the family" (p 59). Zulueta and Liwag (2001) also said that sociological studies about prostitution reveal that its main cause is poverty. According to the study participants, the struggle of prostituted women for emancipation is more than just a social prejudice and economic inequality, or absence of employment opportunity; it is a political issue.

The study further revealed the benefits that the students gained. The study participants themselves shared how they experienced the proper process of conducting an interview and observation, giving attention to interviewees, and showing respect to the decision of those who declined to be interviewed. They became creative in their approach and more sensitive to the feelings of their subject/participants by avoiding discriminatory statements. They conquered fear. They experienced sharing of responsibility: while one asked questions, others took the initiative to document. They experienced formulating good questions and outlining observed facts, dealing with nongovernment organizations, and socializing. This aspect of socialization is one benefit noteworthy to mention as a gain of this study. As Cabalu et al. (2006) have claimed "Socialization is a fundamental process insofar as sociological understanding is concerned". It is acquiring from others ideas about life and society. Learning through socialization is a phenomenon referred to by Charles Horton Cooley as "looking glass self". It makes people function effectively and appropriately with their own group or community.

Social Awareness

The study participants discovered the gap between the rich and the poor which they related to social stratification and social status topics of Sociology. Situations like sick people sharing one hospital bed proved such disparity. Inequality in income is evident in the poor families' preference to low-level hospitals while the rich prefer healthcare center with better facilities and services (Mahilum, 2007; p. 162). Furthermore, the study participants revealed cognitive and affective learning namely, ethnocentrism, cultural relativism, respect to cultural beliefs, research ethics, dysfunctional family, and "flesh-for-money" industry where prostituted women are aware that they are exploited by men and the establishment owners make money out of them.

They changed from being passive to being active about establishing solidarity with the poor. This manifests their learning about multicultural education (Bilbao et al., 2006). Today's challenge is to promote multicultural education towards respect to diversities and differences. Schools have to link and establish networks for mutual benefit and assistance needed. Salcedo, et al., (1999) said that "when the 'we' feeling becomes excessive, it results in ethnocentrism – the belief that the group is the best and all others are inferior" (p. 25). This is opposite to ethno-relativism. Gregorio (2009) said "Ethnocentrism or egocentrism blinds cultural appreciation and tends to proceed to the judgment that other cultures are inferior from one's own".

Significantly, the following feelings surfaced among the study participants: disappointment with the government, admiration on the perseverance of the poor, gratefulness to the health providers and nongovernment organizations, guilt for having been part of and passive about the persecution of the poor, happiness for the field research experience, optimism for liberation and poverty alleviation, sadness seeing misery, confusion about complexities of social problems, and satisfaction to having answered the questions about micro society.

Transformation in Self

The study participants internalized "values pertaining to well being" (Bilbao et al., 2006) like education, family, health and life, simple things but dearly needed by poor people, and good sense of spending time and money. Neri (2007), said that time management skill of students is significantly correlated with their abstract conceptualization. "Time management skill cultivates their critical thinking skill such as synthesis, analysis, and the integration of the concrete experience after reflective observation" (p. 97). Likewise, they internalized values of vital feeling (Bilbao *et al.,* 2006) like contentment, fairness, justice, acceptance, patience, courage, sacrifice, diligence and perseverance, open-mindedness, understanding, flexibility, kindness and humility, creativity, honesty and simplicity, respect, not judgmental, gratification, love and care for family and self, care for the sick, patriotism, and friendliness. Bilbao, *et al.* said that school and community relations are strengthened by values of respect for the rights of others, cooperation, and deep

sense of responsibility. Acero, (2007) said that learning in the community is realistic and a favorable undertaking. Here, the learners are provided with opportunity to interact. Such interaction facilitates the acquisition of values and norms and even the culture of the people. Gregorio (2009) said that among other factors, "values are shaped by our social interactions with the community. The physical conditions of the environment exert a significant impact on the values system of the people".

Change happened within the study participants. They became open-minded, caring, understanding, and respectful. They no longer feel awful about scavengers. They learned to reach out. They became more sensitive and cautious about words and actions so as not to offend people. They became eager to analyze social realities. They changed their social orientation. They now view prostituted women as wounded victims of corrupt political system than as curse.

They vowed to promote social justice, to treat people fairly, participate in activities urging the government to do concrete and sincere action to alleviate poverty like formulating or amending policies that favor the poor, to advocate optimism that something can be done to liberate the poor, to share financial and material donations, to connect with NGOs who assisted them in their field study, to help campaign for just compensation and free education, and to initiate small group sharing and conferences. They opted to denounce the oppression of the poor by including such concern in their discussions with family members, friends and classmates. Several female study participants strongly express advocacy for women emancipation.

All these changes in social orientation and strengthening of conviction conform to the assertion of Corpuz (2003) on the effects and benefits in community immersion which are increased emotional intelligence and strengthened school-community relationship. The study participants became closer to the people in the micro society they encountered, connected, and dealt with. They now expressed solidarity with the poor. Salcedo, (1999) citing Bierstedt (1970) said that "in-group" is the group where individuals want to belong, to be in solidarity with, and to have camaraderie and sympathetic feeling.

Unified Suggestion for Action

To establish a student organization was expressed as a common aspiration. This organization is responsible in pursuing advocacies for human rights promotion, establishing link with government programs, NGOs and Church programs, bridging support to depressed communities, and realizing solidarity between students and the poor sectors. Such solidarity is beyond advocating personal change and internalizing good values but living a "reconstructed life" where there is true human development. "The attainment of well-being in terms of longer and more meaningful lives, being well-nourished and free from avoidable diseases, being self-sheltered and clothed, being economically and physically secured, literate and empowered with their social circumstances" (Salcedo, 1999).

Salcedo supports the desire of the study participants for social change. He said "the aphorism that 'there is nothing more constant than change' is true of culture" (p. 19). He further said that the government should be concerned about the improvement of health of the working population through better medical and public health programs and improvement of nutrition which would increase working capacity of the people throughout their working life.

Some study participants shared their experiences to the entire class through dramatization and role playing. These creative presentations manifested the extent of the depth of the students' understanding of the social problems. Dale's cone of experience (Sampath, *et al*, 2006) explains that from the purposeful experience learners are capable to contrive the experience into something like working model where the reality shared is smaller in size or complexity but of the same value or even for easier understanding.

CONCLUSION AND RECOMMENDATIONS

Based on the findings stated, we conclude that study participants experienced conscientization. As students of the University of the Immaculate Conception, this experience is a daring concretization of their commitment with the institution's philosophy on evangelization and mission to serve others with humility and love, to exercise leadership, to respect the dignity of persons especially the poor, to work for justice, to promote peace and preserve the integrity of creation, and to promote and strengthen our Filipino culture and values (Administrative Manual, 2007). The commitment of the study participants to help inform others of the aspirations and struggle of the poor to alleviate from poverty is a response to a call to embark in the overall mission of education. Bilbao, (2006) said "you are expected to contribute to the betterment of this world in your own unique way. Your unique and most significant contribution to the humanization of life on earth is in the field where you are prepared for…" (p. 45).

We recommend that this study be presented in educational conferences, not only to share the experiences of the study participants but also to promote conscientization technique in learning sociology. Popularizing the content and strategy of this study is viewed to have an ultimate impact to the greater attainment and deeper realization of school's mission. Other benefits that might be gained from this include the coming up with an institutional response to the articulated individual advocacies and unified suggestion of the study participants; initiating and forming a student organization tasked to link with government, nongovernment organizations and Church programs towards providing meaningful service with the grassroots communities. It is recommended further that learning materials containing the experiences of the study participants during their encounters with microsocieties should be produced for greater and meaningful learning, that offices and departments of the institution such as the Community Extension Program and the Research and Development Center should be informed about the findings of this study as possible bases for planning and prioritization. Finally, this study can be replicated extending to other micro societies which were not made part of this study such as the fisher folks, peasants, other tribes of indigenous people, and the urban poor.

REFERENCES

Acero, V.O., Javier, E.S. & Castro, H.O. (2007). *Principles of teaching 1.* Manila, Philippines: Rex Bookstore, Inc.

Administrative Manual (2007). University of the Immaculate Conception. Davao City.

Bilbao, P. P., Corpuz, B. B., Llagas, A. T., & Salandanan, G. G. (2006). *The teaching profession.* Quezon City: Lorimar Publishing, Inc.

Birion, J.C., Astorias, M.C., De Jose, E.G., Dimacisil, J.M., Salise, P.B., Tinio, J.B., Villegas, J.J. (2008). *General psychology.* Valenzuela City, Philippines: Mutya Pub. House, Inc.

Cabalu, D. H., Pasigui, R. E., Sadsad, E. S., & Wright, J.A. (2006). *Applied sociology: A modular approach.* Malabon City, Philippines: Mutya Publishing House, Inc.

Casinto, C. D. C. (2009). *Handbook on principles of teaching 1.* Manila: Rex Book Store.

Corpuz, B. B. (2003). *Community immersion and integration.* Manila: Lorimar Publishing, Inc.

Corpuz, B. B. & Salandanan, G. (2007). *Principles of teaching 1.* Manila: Lorimar Pub., Inc.

Creswell, J. W. (1998). *Qualitative inquiry and research design: choosing among five tradition.* California 91320: Sage Publications, Inc.

Garcia, M. B. (2004). *Focus on teaching: approaches, methods and technique.* Manila, Philippines: Rex Bookstore, Inc.

Gregorio, B. L. (2009). *Peace and development education: an introduction to the core concepts in peace and development education for college students.* Quezon City: C & E Publ., Inc.

Hall, C.S. et al (1998). *Theories of personality*. Canada: John Wiley & Sons, Inc. p 591

Johnson, B. & Christensen, L. (2008). *Educational research: quantitative, qualitative and mixed approaches* (3rd ed.). USA: Sage Publications, Inc.

Kolb, D. A. (1999). *Experiential learning theory: Previous research and new directions.* Department of Organizational Behavior, Weatherhead School of Management. Cleveland, OH44106: Case Western Reserve University.

Lucas, M. R. D. & Corpuz, B. B. (2007). *Facilitating learning: A metacognitive process.* Manila, Philippines: Lorimar Publishing, Inc.

Neri, D. L. (2007). Learning styles and study skills among nursing students. *Cagayan de Oro, Philippines: Liceo Journal Higher Education Research. 5*(1), 97.

Mahilum, J. V. (2007*). Sociological and economic dimensions of clients' choice of health care services. CDO, Phil. Liceo Journal Higher Education Research. 5*(1), 162.

Morrow, & Brown (1994). *Critical theory and methodology synopsis.* Retrieved on April 6, 2010 from http://www.borders.com.au/book/critical-theory-and-methodology/760299/

Ng, K. Y., Dyne, L. V., & Ang, S. (2009). From experience to experiential learning: cultural intelligence as a learning capability for global leader development. *Academy of Management Learning & Education, 8*(4), 511–526. Retrieved on April 7, 2010 from http://culturalq.com/papaers/AMLE%20200%20Ng_Van%20Dyne%20&%20Ang.pdf

Palispis, E. S. (2008). *Introduction to sociology and anthropology.* Manila: Rex Book Store

Salcedo, L. L., Peralta, AM.R., Ronquillo, A.A., & Espiritu, S.C. (1999). *Social issues.* Quezon City, Philippines: Katha Publishing, Inc.

Santos, R. D. (2007). *Assessment of learning 1.* Manila, Philippines: Lorimar Publishing, Inc.

Sampath, K. et al. (2006). *Introduction to educational technology* (5th ed.). New Delhi: Sterling Publishers Private Limited.

Shor, I. & Freire, P. (1987). *A pedagogy of liberation.* Massachusetts: Bergin & Garvey Pub.

Spradley, J.P. (1979). The ethnographic interview. New York: Holt, Rinehart, and Winston. Retrieved from htt://www.ncrel.org/sdrs/areasissues/educatrs/profdevl/pd5lk2.htm

Vega, V. A., Prieto, N. G. & Carreon, M. L. (2006). *Social dimensions of education.* Quezon City, Philippines: Lorimar Publishing, Inc.

Zulueta, F. M. & Liwag, D. B. (2001). *Social problems and issues in the Philippines.* Mandaluyong City, Philippines: National Bookstore

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MULTI-DIMENSIONAL FACTORS IN PHYSICS INSTRUCTION: ENHANCED COLLABORATIVE ACTIVITIES IN A STATE INSTITUTION IN NEGROS OCCIDENTAL

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ABSTRACT

This study aimed to assess the multidimensional factors in physics instruction at Carlos Hilado Memorial State College for AY 2007-2008 which will serve as a basis for enhanced collaborative activities. It further aimed to determine the students' attitude and difficulty in learning physics and the physics skills needed in the major field of specialization; whether significant differences exist between the perceptions of the teachers and students on the extent of the need of physics skills and the significant relationship that exists among the factors. Descriptive method of research was used in this study. The respondents were the 42 technology teachers handling the nine major fields of specialization and the 178 Bachelor in Science in Industrial Technology (BSIT) representing 55.28 percent of the total 322 third year BSIT students major in Architectural Drafting, Automotive, Computer, Electrical, Electronics, Furniture and Cabinet Making, Foods, Garments, Machine Shop, and Refrigeration and Air Conditioning Technology. The findings revealed that students' attitude towards different topics is positive with moderate level of difficulty in learning physics. Teachers and students had high level of perception on the physics skills needed in their major field. The respondents did not differ significantly in their perception on the extent of need of physics skills. Significant relationship was noted in the attitude, difficulty, and needs of students as a whole and according to gender. No significant relationship was noted in the attitude, difficulty, and needs of students when grouped according to age and major field. It was recommended that physics teachers should improve teaching methodology and produce laboratory manuals, apparatus, and devices in teaching. An Enhanced Collaborative Activities was proposed to improve Physics instruction.

Keywords: Psychics instruction, physics, collaborative activities, students' attitude, students' difficulty, learning

RATIONALE

The situationer and goals of the Medium-Term Philippine Development Plan, 2004-2010 along science and technology and higher education focus on the greater challenge for the continuous development of the country's human capital base and productivity and to raise the level of skills of knowledge in line with Science and Technology.

The Department of Science and Technology also stresses the need to improve science education focusing on the curricular reforms of the contents of Science curricula that will develop competitiveness of the country's knowledge and service and technology workers with the ability to meet industry requirements.

RESEARCH FRAMEWORK

The theory upon which this study was conceptualized and carried out is the theory on Physics education which articulates that physics education develops problem solving skills and provides a firm knowledge of basic science and the ability to apply and adapt knowledge within the workplace (American Physical Society, 2003). For student's attitude, this research was anchored on Zaidi's (2005) concept that the teaching of Science aim to develop scientific attitude among students. Students with scientific attitude manifest questioning of judgment, appraisal of different sides of an issue, verification of knowledge curiosity and appreciation of the natural and human-made world, open mindedness, intellectual honesty, and cooperation.

In addition to knowledge, skills, and objectives, Ediger and Rao (2005) believed that the teacher needs to stress attitudinal ends of instruction. Good attitudes help students in wanting to learn more Science. This means that having positive attitudes towards science guides students to achieve knowledge and skills objectives in depth. Redish et al. (1996) also stressed that students not only bring their prior understanding of physics concepts into the classroom but they also bring to their physics class a set of attitudes, beliefs, and assumptions about the nature of physics knowledge, what the students are to learn, what skills will be required of them, and what they need to do to succeed.

In determining the students' needs, Taba and Tyler in the book of Bago (2001), exemplified that diagnosis or assessment of needs provides useful information regarding the adjustments to be made in terms of goals, content, instructional techniques and expectations of the learners. For curriculum reform projects intended for development of program or year level plans, the diagnosis of needs phase is undertaken to survey and determine the status of education in a given environment.

The College of Industrial Technology of Carlos Hilado Memorial State College has a goal to develop world-class industrial workers and middle-level managers equipped with scientific knowledge, technological skills, and ethical work values to achieve a desirable quality of life. Physics is one of the fundamental science subjects included in the BSIT curriculum which aims to develop student's critical thinking and manipulative skills in the application of scientific laws related to technology. It has been observed that this subject is not so interesting to most students when they experience difficulties in understanding the principles and mathematical formulations of scientific ideas which can be applied in their major field of specialization namely; automotive, drafting, computer, electronics, electricity, foods, furniture and cabinet making, garments, machine shop, and refrigeration and air conditioning technology.

This study aimed to determine the attitude, difficulty, and needs of students in learning Physics which will serve as basis to formulate an output to improve Physics instruction which is the Enhanced Collaborative Activities with the coordination of Physics and Technology teachers.

METHODOLOGY

The descriptive method of research was used in this study utilizing two instruments in data gathering. The first instrument was The Physics Skills Perception Rating Scale which was made by the researcher based on the specific objectives of the course outline in Natural Science 5T and Natural Science 6T. The second instrument was The Student's Attitude Rating Scale which was based on the research report of Siswoyo entitled "*Student's Attitude and Conception About Science*" (www.geocities.com).

RESULTS AND DISCUSSION

The students' attitude was positive in all Physics topics. The highest mean score of 4.23 was in the item where students appreciate the importance of scientific measurement to Physics and technology while the lowest mean score was 3.51, which is converting units from English to Metric System and vice versa (Table 1).

The students perceived a moderate level of difficulty in learning all the identified Physics skills. In Physics I, among the cognitive skills, the highest mean score of 3.17 pertains to solving problems using equations for work, energy, and power while the lowest mean score of 3.04 is for the skills of explaining boiling, evaporation and sublimation. Among the four affective skills, the highest mean score of 2.83 pertains to stating the importance of measurement to Physics and technology while the lowest mean score of 2.22 is to follow safety practices in performing laboratory experiments. The students perceived a moderate level of difficulty in the use of precision instruments and to perform laboratory experiments in relation with motion, forces, and heat. In Physics II, students perceived a moderate level of difficulty in all the skills. The highest mean score in cognitive skills was 3.06 which are to explain reflection, refraction, interference, and resonance of sound. Low level of difficulty was perceived in identifying insulators and conductors with mean score of 2.47 following safety practices in performing laboratory experiments with mean score of 2.7 (Tables 2 and 3).

The teachers and students had high level of perception on the Physics skills needed in their major field of specialization. Specifically, teachers had a very high level of perception on the need of the following Physics skills; to convert units from English to Metric System or vice versa and smaller to bigger measures and vice versa; identify standard units of measurement and rounding off numbers; follow safety practices in performing laboratory experiments; develop orderly habits, intellectual honesty and self-reliance through planned laboratory activities; develop manipulative skills in the use of precision measuring instruments; and appreciate the nature of wave, light and sound; relate the importance of the discovery of electricity and magnetism to the development of technology (Tables 4 and 5).

The teachers and students did not differ significantly in their perception as to the extent of need of physics skills when they were grouped according to major field of specialization in Electrical, Electronics, Furniture and Cabinet Making, Foods, and Refrigeration and Air Conditioning Technology courses. Significant differences existed when the respondents were grouped according to major field of specialization in Architectural Drafting, Automotive, Garments, and Machine Shop Technology (Table 6).

Significant relationship was noted in the attitude, difficulty, and needs of students when they were grouped according to gender. No significant relationship was noted in the attitude, difficulty, and needs of students when they were grouped according to age and major field of specialization (Tables 7 to 10).

Table 1
Student-Respondents' Attitude Towards Different Topics in Physics

	Item	Mean	Interpretation
1	I appreciate the importance of scientific measurement to Physics and Technology.	4.23	Positive
2	It is easy for me to identify insulators and conductor	4.12	Positive
3	I like learning the sources of energy and energy conservation measures to minimize world problems in energy.	4.06	Positive
4	I understand that friction has practical applications	4.04	Positive
5	I feel comfortable in understanding the physical meaning of work, power and energy.	4.01	Positive
6	I like drawing simple circuit diagrams.	3.99	Positive
7	I find circuit combination of resistances very useful in technology.	3.96	Positive
8	It is useful for me to understand the importance of capacitor in a circuit.	3.95	Positive
9	I am interested in using precision measuring instruments to obtain accurate results.	3.93	Positive
10	I gained understanding on the nature of light and sound when I learn about wavelength, speed, frequency, amplitude and period of wave.	3.88	Positive
11	It is helpful for me to learn concepts in linear motion, freely falling bodies and projectile which are relevant to everyday life.	3.87	Positive
12	I learn to appreciate scientific inventions through the discovery of electromagnetism	3.85	Positive
13	I enjoy solving problems in Ohm's Law	3.84	Positive
14	I enjoy rounding off numbers to obtain the desired significant figures.	3.79	Positive
15	I can enhance my knowledge about atomic structure of matter in the study of electricity.	3.79	Positive
16	I developed my critical thinking skills in solving problems about Newton's Laws.	3.78	Positive
17	I find interesting to know the effects of heat on length of solids.	3.78	Positive
18	I understand the useful effects of learning equilibrium of forces and torque.	3.69	Positive
19	I find physical measurements easier to express with the use of scientific notation.	3.63	Positive
20	It is useful for me to differentiate vector and scalar quantities.	3.54	Positive
21	It is easy for me to convert units from English to Metric System and vice versa.	3.51	Positive
	Average Weighted Mean	**3.87**	**Positive**

Table 2
Student-Respondents' Perception on the Level of Difficulty in Physics I

	COGNITIVE SKILL	X	Interpretation
1	Solve problems using equations for work, energy and power	3.17	Moderate
2	Describe the methods of heat transfer and cite examples of each	3.16	Moderate
3	Differentiate vector and scalar quantities.	3.16	Moderate
4	Convert units from smaller to bigger measures and vice versa	3.15	Moderate
5	Convert units from English to Metric System or vice versa.	3.12	Moderate
6	Determine torque and moment of force.	3.12	Moderate
7	Explain Newton's Laws of Motion.	3.09	Moderate
8	Describe the effects of heat on the length of solids.	3.04	Moderate
9	Identify standard units of measurement and rounding off numbers.	3.04	Moderate
10	Describe linear motion, freely falling bodies and projectile	2.99	Moderate
11	Describe friction and its uses.	2.96	Moderate
12	Explain boiling, evaporation, and sublimation.	2.83	Moderate
	Average Weighted Mean	3.07	Moderate
	AFFECTIVE SKILL		
1	State the importance of measurement to Physics and Technology.	2.83	Moderate
2	Shows awareness of the different sources of energy and energy conservation measures.	2.77	Moderate
3	Develop orderly habits, intellectual honesty and self-reliance through planned laboratory activities.	2.69	Moderate
4	Follow safety practices in performing laboratory experiments.	2.22	Low
	Average Weighted Mean	2.63	Moderate
	PSYCHOMOTOR SKILL		
1	Develop manipulative skills in the use of precision measuring instruments.	2.78	Moderate
2	Perform laboratory experiments in relation with motion, forces and heat.	2.73	Moderate
	Average Weighted Mean	2.76	Moderate

Table 3
Student-Respondents' Perception on the Level of Difficulty in Physics II

	COGNITIVE SKILL	X	Interpretation
1	Explain reflection, refraction, interference and resonance of sound	3.06	Moderate
2	Describe wavelength, speed, frequency, amplitude and period of wave.	2.97	Moderate
3	Describe atomic structure of matter and nature of electric current.	2.93	Moderate
4	Explain loudness, pitch, intensity and quality of sound.	2.90	Moderate
5	Describe the use of capacitors, electromagnets, motors and generators.	2.85	Moderate
6	Solve problems using Ohm's Law	2.81	Moderate
7	Describe the nature and sources of sound.	2.80	Moderate
8	Differentiate reflection of light from refraction of light	2.79	Moderate
9	Calculate the voltage, current and resistance in series, parallel and series-parallel circuits.	2.74	Moderate
10	Enumerate the sources of voltage	2.63	Moderate
11	Enumerate the different sources of light.	2.62	Moderate
12	Draw simple circuit diagrams	2.56	Moderate
13	Identify insulators and conductors	2.47	Low
	Average Weighted Mean	2.78	Moderate

Table 3
Continued

AFFECTIVE SKILLS		X	Interpretation
1	Relate the importance of the discovery of electricity and magnetism to the development of technology	2.92	Moderate
2	Appreciate the nature of wave, light and sound and their applications to your technology course.	2.86	Moderate
3	Develop orderly habits, intellectual honesty and self-reliance through planned laboratory activities.	2.71	Moderate
4	Follow safety practices in performing laboratory experiments.	2.44	Low
	Average Weighted Mean	2.73	Moderate
PSYCHOMOTOR SKILLS			
1	Use VOM tester to measure voltage, current and resistance	2.70	Moderate
2	Perform laboratory experiments related to electricity, magnetism, light and sound	2.70	Moderate
	Average Weighted Mean	2.70	Moderate

Table 4
Extent of Need of Physics I Skills in Technology Courses As Perceived by Teachers and Students

	COGNITIVE SKILL	X	Teacher Interpretation	X	Student Interpretation
1	Convert units from English to Metric System or vice versa.	4.78	Very high	3.97	High
2	Identify standard units of measurement and rounding off numbers.	4.70		4.01	High
3	Convert units from smaller to bigger measures and vice versa	4.50	Very high	3.83	High
4	Solve problems using equations for work, energy and power	4.21	High	3.79	High
5	Describe the effects of heat on the length of solids.	4.15	High	3.60	High
6	Describe the methods of heat transfer and cite examples	4.08	High	3.74	High
7	Explain boiling, evaporation, and sublimation.	4.00	High	3.71	High
8	Describe friction and its uses.	3.90	High	3.68	High
9	Explain Newton's Laws of Motion.	3.80	High	3.68	High
10	Determine torque and moment of force.	3.75	High	3.47	Moderate
11	Describe linear motion, freely falling bodies and projectile	3.68	High	3.48	Moderate
12	Differentiate vector and scalar quantities.	3.58	High	3.54	High
	Average Weighted Mean	4.09	High	3.70	High
AFFECTIVE SKILL					
1	Follow safety practices in performing laboratory experiments	4.80	Very high	4.26	High
2	Develop orderly habits, intellectual honesty and self-reliance through planned laboratory activities.	4.55	Very high	4.01	High
3	State the importance of measurement to physics and technology.	4.33	High	3.97	High
4	Shows awareness of the different sources of energy and energy conservation measures.	4.28	High	3.90	High
	Average Weighted Mean	4.49	High	4.04	High
PSYCHOMOTOR SKILL					
1	Develop manipulative skills using precision measuring instruments.	4.70	Very high	3.97	High
2	Perform laboratory experiments in line with motion, forces and heat	4.08	High	3.94	High
	Average Weighted Mean	4.39	High	3.95	High

Table 5
Extent of Need of Physics II Skills in Technology Courses As Perceived by Teachers and Students

	SKILLS	X	Teacher Interpretation	X	Student Interpretation
COGNITIVE SKILL					
1	Identify insulators and conductors	4.38	High	3.97	High
2	Enumerate the sources of voltage	4.13	High	3.93	High
3	Solve problems using Ohm's Law	4.13	High	3.89	High
4	Calculate the voltage, current and resistance in series, parallel and series-parallel circuit.	3.98	High	3.89	High
5	Describe the use of capacitors, electromagnets, motors and generators.	3.95	High	3.81	High
6	Draw simple circuit diagrams.	3.95	High	3.84	High
7	Describe atomic structure of matter and nature of electric current.	3.75	High	3.74	High
8	Describe wavelength, speed, frequency, amplitude and period of wave.	3.73	High	3.68	High
9	Enumerate the different sources of light.	3.70	High	3.74	High
10	Describe the nature and sources of sound.	3.63	High	3.70	High
11	Explain reflection, refraction, interference and resonance of sound.	3.60	High	3.56	High
12	Differentiate reflection of light from refraction of light	3.53	High	3.66	High
13	Explain loudness, pitch, intensity and quality of sound.	3.50	High	3.62	High
	Average Weighted Mean	3.53	High	3.77	High
AFFECTIVE SKILL					
1	Appreciate the nature of wave, light and sound and their applications to your technology course.	4.75	Very high	3.78	High
2	Relate the importance of the discovery of electricity and magnetism to the development of technology	4.65	Very High	3.85	High
3	Develop orderly habits, intellectual honesty and self-reliance through planned laboratory activities.	4.10	High	4.06	High
4	Follow safety practices in performing laboratory experiments.	3.98	High	4.22	High
	Average Weighted Mean	4.37	High	3.98	High
PSYCHOMOTOR SKILL					
1	Use VOM tester to measure voltage, current and resistance.	4.00	High	3.97	High
2	Perform laboratory experiments in relation to electricity, magnetism light and sound.	3.75	High	3.90	High
	Average Weighted Mean	3.87	High	3.94	High

Table 6
Difference Between the Perceptions of Teacher and Student-Respondents as to the Extent of Need of Physics Skills to Technology Courses

Variable		*N*	*X*	*S*	*p*	Interpretation
As a Whole						
	Teachers	42	4.45	0.40		
	Students	178	3.65	0.61	0.064	Not significant
Architectural Drafting						
	Teachers	5	3.65	0.61		
	Students	16	4.56	0.50	0.007	Significant
Automotive						
	Teachers	7	3.78	0.60		
	Students	25	4.51	0.30	0.005	Significant
Computer						
	Teachers	1	3.51			
	Students	16	3.57	0.49		
Electrical						
	Teachers	7	4.13	0.60		
	Students	22	4.54	0.40	0.099	Not significant
Electronics						
	Teachers	8	4.24	0.50		
	Students	41	3.96	0.55	0.170	Not significant
Furniture and Cabinet Making						
	Teachers	2	4.53	0.70		
	Students	5	3.68	0.72	0.214	Not significant
Foods						
	Teachers	3	3.77	0.70		
	Students	25	3.91	0.61	0.714	Not significant
Garments						
	Teachers	3	2.62	0.90		
	Students	7	4.09	0.51	0.010	Significant
Machine Shop						
	Teachers	4	2.95	0.80		
	Students	14	3082	0.45	0.011	Significant
Refrigeration and Air Conditioning						
	Teachers	2	4.12	0.50		
	Students	7	4.46	0.49	0.408	Not significant

Table 7
Relationship Among Multidimensional Factors in Physics Instruction When Grouped as a Whole vs. Attitude, Difficulty and Need

Variable	*X*	*S*	*N*	*r*	Interpretation
Attitude vs. Difficulty	3.87 2.84	0.53 0.63	178 178	-0.280	Significant
Attitude vs. Need	3.87 3.82	0.53 0.62	178 178	-0.100	Not significant
Difficulty vs. Need	2.84 3.82	0.63 0.62	178 178	-0.150	Significant
Attitude vs. Difficulty and Need	3.87 2.84 3.82	0.53 0.63 0.62	178 178 178	0.315	Significant
Difficulty vs. Attitude and Need	2.84 3.87 3.82	0.63 0.53 0.62	178 178 178	0.561	Significant
Need vs. Attitude and Difficulty	3.82 3.87 2.84	0.62 0.53 0.63	178 178 178	0.211	Significant

Table 8
Relationship Among Multidimensional Factors in Physics Instruction Gender vs. Attitude, Difficulty and Need

Variable	*X*	*SD*	*n*	*r*	Interpretation
Attitude of Male Vs. Attitude of Female	3.93 3.70	0.54 0.63	116 62	0.189	significant
Difficulty of Male Vs. Difficulty of Female	2.94 2.71	0.75 0.64	116 62	0.153	significant
Need of Male Vs. Need of Female	3.99 3.72	0.57 0.66	116 62	0.208	significant

Table 9. *Relationship Among Multidimensional Factors in Physics InstructionAge vs. Attitude, Difficulty and Need*

Variable	*X*	*S*	*n*	*r*	Interpretation
Age as a Whole vs. Attitude	3.85	0.58	178		
Difficulty	2.86	0.72	178		
Need	3.89	0.62	178	-0.107	Not significant
Attitude of Older vs. Attitude of Younger	3.79	0.66	92		
	3.91	0.48	86	-0.1403	Not significant
Difficulty of Older vs. Difficulty of Younger	3.92	0.74	92		
	2.80	0.70	86	0.974	Significant
Need of Older vs. Need of Younger	3.91	0.61	92	0.030	Not significant

Table 10. *Relationship Among Major Field of Specialization and Attitude, Difficulty, Need*

Variable	*X*	*S*	*n*	*r*	Interpretation
Major Field of Specialization vs. Attitude	3.85	0.58	178	0.100	Not significant
Major Field of Specialization vs. Difficulty	2.86	0.72	178	-0.238	Significant
Major Field of Specialization vs. Need	3.89	0.62	178	-0.095	Not significant

RECOMMENDATION

Based on the findings, the following recommendations were formulated:

1. Physics teachers should improve teaching methodology; produce physics laboratory manual; use apparatus and devices in experiments commonly used in students' major field; integrate technology shop work to physics activities and undergo training on shop activities related to physics.
2. College administrators should formulate policies in the preparation of modules and manuals; incentives for teachers as authors; provide adequate modern instructional facilities; send teachers to seminars, trainings and industrial immersion.
3. An Enhanced Collaborative Activities was proposed to improve Physics instruction.

REFERENCES

American Physical Society. (2003). *Physics Trends.* New York U. S. A. Retrieved May 10, 2007, from http://www.aps.org

Bago, A. (2001). *Curriculum development: The Philippine experience.* De La Salle University Press Inc.

Ediger, M. & Rao, D. B. (2005). *Teaching science successfully.* U.S.A. Discovery Publishing House.

National Economic and Development Authority (NEDA). (n.d.). *Medium Term Philippine Development Plan 2004-2010.* Retrieved May 11, 2007, from http://www.neda.gov.ph

Redish, E. et al. (n.d.). *Teaching physics: Figuring out what works.* University of Maryland, College Park, U. S. A. Retrieved May 10, 2007, from http://www.physics.umd.edu

Siswoyo. (n.d.). *Students' attitude and conception about science.* Retrieved December 4, 2007, from http://www.geocities.com

Zaidi, S. M. (2005). *Modern teaching of science.* New Delhi: Annual Publications.

DIALECTICAL TENSIONS IN INTERCULTURAL CLASSROOMS: BRINGING INTERNATIONALITY TO THAI STUDENTS

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ABSTRACT

Grounded in Bakhtin's dialogism, relational dialectics theory views communication in relationships as a dialectical tension. Dialectical theory rests on the notion that individuals who compose relationships are simultaneously similar and different. Rather than perceiving dialectical tensions as relational obstacles, dialectics scholars view them as turning points which propel every relationship including teacher-student's. In an intercultural classroom, the different styles of communication, caused by different cultures, perspectives, and expectations, tend to cause interpersonal contradictions or dialectical tensions between teachers and students. This study, therefore, explores the dialectical tensions Thai students have when they interact with native English-speaking teachers in an intercultural classroom. Twenty in-depth interviews with Thai students and four classroom observations indicate that Thai students encountered eight tensions: stability/change, openness/closedness, separation/connection, active/passive, hierarchy/equality, resentment/affinity, attention/distraction, and compliance/resistance. Additionally, the study revealed that all dialectical tensions encountered by Thai students in intercultural classrooms are interrelated. Two types of interrelation among dialectical tensions indicated in this study are vertical and horizontal relationships.

Keywords: Dialogism, dialectical tension, intercultural classroom, native English-speaking teacher, Thai student

BAKHTIN'S DIALOGISM

The term *dialogism* refers to the concept developed by Bakhtin (1981), one of the most influential Russian scholars in the 20th century. Although Bakhtin's original work is primarily dealing with literature, he has made significant contributions to different areas of study including language, philosophy, and education. Dialogism is a theory which defines consciousness as a social network based on the exchange of ideas among individuals. Although Bakhtin's works are abundant, his philosophy basically seeks to understand human behavior through the use of language or specifically dialogue (Holquist, 2002). Dialogue can be regarded as a conversation: speaking and exchange. In a conversation, two different speakers perform different utterances, but these differences are held together in a relation of dialogue. This dialogue is a metaphor for the unity of the self and other: the simultaneous unity of differences in utterance. Human existence, therefore, is contingent upon engagement in dialogical relations. Although humans exist in a physical and biological sense, they are truly humans when they are in a dialogical relation with others. Consequently, when two different people meet, there is something both of them perceive while there are other things only either of them can see.

Application of dialogism in communication. Bakhtin's work of dialogism is obviously beneficial to different areas of study, particularly philosophy and literature. However, his works are not only used among philosophers and literary scholars, but dialogism encompasses multiple disciplines including

communication. Bakhtin's dialogism made contribution to the role of subject in dialogue. The self and the other relationship is the core concept of dialogue in communication studies (Keaten & Soukup, 2009). Regardless of any context, the self and the other are "permanent tensions in dialogue" (Hammond, Anderson, & Cissna, 2003: 137). These tensions emerge from the inherent sameness and difference between the self and the other. Influenced by Bakhtin's dialogism, there are some communication scholars who applied his idea to explain human relationships. Because Bakhtin (1981) illustrated tensions that exist in all human existence, Baxter and Montgomery (1996) took the deep structure of human experience and applied it to their dialectical theory. Bakhtin believed that language and meanings are created through contradictory poles between human communications. Baxter and Montgomery (1996) and other communication scholars have found a number of binary poles in relational dialectics, where continual tensions operate in human relationships. Relational dialectics has been employed in understanding relationship types including friendships, romantic relationships, family relationships, coworkers, social networks, and others. The relational dialectics views these communication patterns as continual dialectical tensions experienced by relationship partners. In a relationship, partners have different needs and desires. These contrasting needs can cause the contradictory forces in a relationship. Prentice and Kramer (2006) proposed that these dialectical binaries are equally important. In order to maintain the relationship, humans need to balance those tensions: their own's and others' needs. Therefore, the relationship maintenance is a process of coping with the ceaseless change resulting from the contradictions in relationships. While tensions are mostly perceived as discomfort and conflicts, dialectics sees contradictions in relationships as cooperation and balance (Fassett & Warren, 2007). In other words, these tensions are turning points which make relationships grow.

Application of dialogism in a classroom. Drawing on dialogism and the theory of language as dialogue, Bakhtin's (1981) work has influenced educational scholars since the early 1990s (Matusov, 2007). Although his primary contribution is literary studies, Bakhtin's ideas have a big impact on educational world. Bakhtin has influenced educational research and practices even though he did not directly associate his major thinking with pedagogy. The dialogical as the center of human existence has affected educational theory (Sidorkin, 1999). It promotes dialogue in education as an effective tool of instruction. For Bakhtin, classrooms are intertexual sites where dialogues from other times and spaces meet and clash (Bakhtin, 1981). Bakhtin's conceptualization of dialogue has tremendous significance implications for understanding of learning process. Obviously, learning emerges from social interaction rather than in the individual learner's head (Hall, Vitanova & Marchenkova, 2005). For Bakhtin, it is only through knowing others that we can know ourselves. Although dialectical theory, particularly dialectical tensions, has been prevalently used in the study of interpersonal relationship like friendships, and romantic relationship only little attention has been paid to the teacher-student relationships as interpersonal relationships. Since each individual is not identical, teachers and students who are engaging in the same classroom tend to be different, especially when they are from different cultures. These differences, as a result, can cause tensions. Understanding dialectical tensions, teachers and students have leads to the understanding of classroom communication. While teachers are teaching and students are learning in the class, their needs and desires may not match. The disagreement of educational needs in the classroom may; consequently, affect the communication patterns, teaching styles, and learning achievements. This study, hence, explores dialectical tensions between teachers and students who have different cultural backgrounds through classroom dialogues. In this study, dialogism is used as the underlying assumption that human existence is full of contradictions. These contradictions, however, are cooperation that helps grow relationships. Dialectical tensions in an intercultural classroom, therefore, are another circumstance that helps maintain the relationships between teachers and students who have different cultures. Specifically speaking, this study uses dialogism to explain the dynamic and continual process of relationship between native English-speaking teachers and Thai students through the classroom dialogue. The research question of this study is what dialectical tensions are experienced by Thai students who study with native English-speaking teachers in an intercultural classroom?

METHODS

In order to understand dialectical tensions Thai students have with their native English-speaking teachers in an intercultural classroom, qualitative in-depth interviews and classroom observations were used in this study. Intercultural classes at four different universities in Thailand were primary research settings. Because the data was regarded as strictly confidential, the real name of each university were not exposed. The Central University, the North University, the West University, and the East University, therefore, were used to refer to the four research settings. The observations were administered at four content classrooms in an undergraduate level. In this study, a communication class at the Central University, a law class at the East University, and two business classes, one at the North University, and the other at the West University, were observed. All classes were observed for the entire semester. Apart from the classroom observations, the in-depth interviews were conducted with 20 Thai students, 10 males and 10 females, who were studying in those four classrooms. These Thai students had to study with native English-speaking teachers, who are one of these nationalities: American, British, Canadian, Australian, and New Zealander. The Thai students must be in international programs, at the undergraduate level, in Thailand for at least a year. The reason why all participants must have intercultural experience for more than a year is that after a year of intercultural encounter, they will have some dialectical tensions to share. In order to maintain their confidentiality, pseudonyms were applied to all participants in this study. After interview transcripts and observation notes were built up; the grounded theory, open coding, categorization, and thematization, were applied along with the constant comparison. During this process, emerging tensions were compared to one another to find similarities and differences based on the theoretical framework, subjective perspectives, and intuitive understanding. The underlying commonalities were examined and assigned by new themes. To supplement the themes and interpretation, elaborate quotations from interviews and selective incidents from classroom observations were also presented

FINDINGS

Based on interview data and classroom observations, Thai students encountered eight dialectical tensions in their intercultural classrooms with native English-speaking teachers. The eight contradictions consist of stability/change, openness/closedness, separation/connection, active/passive, hierarchy/equality, resentment/affinity, attention/distraction, and compliance/resistance.

Stability/Change. This tension refers to the dilemma between the need for a classroom and a teacher to be strict, stable, and predictable and the need for them to be flexible, changeable, and unpredictable. Although a classroom needs to have some structure, college students, who have been grown up with television and video games, usually need constant variety and stimulation (Prentice & Kramer, 2006). Apinan encountered the tension of stability/change when he desired for novelty. He said, "*The class is a routine. We never have any activity in class. I guess the teacher had used the same PowerPoint slides in this course for many years. There is nothing new in this class*". Whereas Apinan was unsatisfied with the routine, Vanida felt the predictability was easy for her attention. She said, "*I had a class with an active teacher who always switched things around in class. It's exciting, but it's difficult for me to concentrate*". Because too much planned created boredom while too much spontaneous made it difficult for students to prepare for the class, Salinee also demanded a classroom with the proper balance between predictability and novelty. Consider her statement:

I want the class to be in the middle, not too fixed, not too flexible. If it happens to have a quiz on my absent day, it will be so bad. A teacher should announce in advance about the exam and due date so I can plan which day I have to attend the class.

Even though some students accepted that stability made a classroom more structured, most Thai students preferred having a fluid class where teachers adapt to Thai culture. Pongsak wanted his teacher to prepare for the differences. For him, native English-speaking teachers should learn Thai culture before coming to teach in Thailand.

Openness/Closeness. This tension concerns how much disclosure and secrecy is needed in a classroom and in teacher-student relationships. Interacting with native English-speaking teachers, Thai students had to decide whether to be honest and share their privacy to their teachers, or to keep their personal thought with themselves. Most Thai students revealed that they had never shared their personal issues with the native English-speaking teachers. Danai said, *"I never talked with them about my problem. I think we're not that close. I think westerners have privacy so we shouldn't cross that line"*. In addition, Thai students encountered the tension of whether they should be direct to their teachers or to keep their opinions with them. Many Thai students admitted that they decided not to tell their teachers honestly because as a good student, they should not complain a teacher. Surasak said, *"No matter how much I don't like my teacher, I will never let him know. It's not a good thing to show negative feeling about a teacher"*. In a classroom observation, I found that Thai students chose to complain their native English-speaking teachers with their Thai friends instead of directly telling them what they thought. In one class at the East University, a student who sat next to me could not follow what her American teacher said. Rather than asking the teacher to repeat it over again, that student said to her friend that, "I don't understand why he has to speak that fast".

Separation/Connection. This dilemma involves the need to be dependent and independent from others. In an intercultural classroom, teachers and students are from different cultures so they may not feel comfortable to be close to each other. The main reason for not being close to native English-speaking teachers was because of the feeling of inappropriateness. Danai admitted he wanted to be closer to his teacher, but he had to be distant. Here is his statement:

I want a closer relationship. If possible, I want to hang out with them, talk with them about something outside of classroom. It never happened because Thai people think it's inappropriate. Moreover, they're foreigners so I don't know if they want us to get close to them or they will be annoyed.

Even though many Thai students demanded more intimacy in their relationship with the teachers, some students were satisfied with the distance. Wuttichai thought it was better to keep some distance because Thai students would be less courteous to their teachers if the relationship was closer.

Active/Passive. The tension of passive and active refers to the opposition of engaging or disengaging in the classroom. Most Thai students admitted that they were very passive in the classroom due to various reasons like shyness, language difference, and laziness. The first reason for not participating in the class was their shyness to speak. Thai students admitted they were afraid of making a mistake. Kittipan said, *"We don't study before class so when the teacher asks something, we can't answer. Many times we're not sure about the answer. We don't want to make a mistake"*. The second reason for Thai students to be passive in a classroom was the language. As the class was international using English as a medium of instruction, some Thai students, whose English was not efficient enough, would not want to say anything. Danai admitted he lost confidence when his native English-speaking teacher could not understand his English. He said he became quieter since he studied in an international program. Another reason for passivity was their laziness. Some students were not shy to make a mistake or to speak English, but they were lazy to

participate. Although most Thai students were extremely passive in the class, some Thai students were active. From the class observation at the West University, Kittipan was the only student who always interacted with the teacher. I noticed that the teacher looked at Kittipan every time he asked a question because he realized that he could expect the answer from him. As his participation was outstanding, I asked him for his opinion in the interview. Here is what he said:

I speak the most in the class because if I don't answer and nobody answers, we can't go anywhere. I want the class to move on so ok I will say something. I feel a little pressure because everybody is waiting for my answer. It has to be me every time. When they don't know the answer, I will answer for them. They don't think negatively about me.

Hierarchy/Equality. This tension refers to the feeling of being different and the same with their native English-speaking teachers in terms of status. Although it was an intercultural classroom, Thai students still perceived teachers as higher. Here is Surasak's opinion:

Thai students are scared of teachers. I have been told since I was young I would be hit if I didn't do homework. Although nobody hits me now, I still have that feeling about my teacher. Talking to a teacher is like talking to a boss. They're superior. It's not about respect. They're higher, but I may talk behind their back.

Although hierarchical perception was prevalent in teacher-student relationships, Thai students realized an attempt of native English-speaking teachers to promote the equity in class. Salukchit said, *"Native English-speaking teachers are more open. They listen to students' opinions. They don't care about the age or status. Thai teachers think about hierarchy so they don't normally listen to us"*. Danai was another student who achieved equality in an intercultural classroom. As he shared his thought:

I like that native English-speaking teachers allow us to express opinions or even argue with them. Thai teachers used to tell me not to argue with the teacher. But here, I can say what I think. They don't care about hierarchy here.

Resentment/Affinity. This tension refers to the dilemma between the prejudice Thai students held against native English-speaking teachers and the great appreciation of them. Piya said he liked to study with native English-speaking teachers because they allowed students to engage in the class. He felt more confident when studying with them. Similarly, Wuttichai agreed that native English-speaking teachers were open for opinions in the classroom. Another characteristic of native English-speaking teachers that Thai students liked was their positive attitudes. Consider Vanida's statement:

I like native English-speaking teachers because they care about others. They're very optimistic and always encourage students. Unlike Thai teachers who always blame their students. But there is something I don't like about native English-speaking teachers. I don't like their course content. Their content flexibility makes me think they're not sure about the subject. I feel like Thai teachers' teaching is more intense.

Although Vanida liked native English-speaking teachers' attitudes, their content flexibility disappointed her.

Attention/Distraction. In a classroom, Thai students had to balance between maintaining and losing their attention to the class. Some Thai students agreed that intercultural class was easier to pay attention to because the class was fun. As Pongsak said:

Thai students will respond well to the teachers who are creative and friendly. The class has to be fun and not boring. I pay more attention to a class with native English-speaking teachers because the class is more fun. Thai teachers are rigid enough so we don't want to have that again from native English-speaking teachers.

This issue was also obvious in every class observation. Thai students seemed to be distracted easily by things around them. At the North University, students were playing with their cell phones, either texting or browsing the internet. The teacher exposed to me later that he did not prohibit them from those habits because he did not think it brought anything bad to the learning environment. Same thing happened at the Central University. No matter how interesting the teaching materials were, most students did not pay a full attention to the class. The use of personal computer in class was prevalent among students. Although the computer usage and texting were not relevant to the class, these habits seemed to be accepted by all native English-speaking teachers at the four observed classrooms because they did not mention about them in their rules, nor prevent any student from doing so.

Compliance/Resistance. This tension refers to the students' dilemma between the need to obey a rule or demand from their native English-speaking teachers and the need to be in breach of it. Some Thai students always followed the rules formulated by their teachers or the university. In a classroom observation at the Central University, I noticed that the teacher always called students to fill up the front seats because most of them preferred sitting at the very back of the class. Despite the students' displeasure to move, most students followed their teacher. Danai who was in that class expressed his thought through this statement:

When I was callea to move to the front, I don't feel any pressure. I think it's better than some teachers who let students sit everywhere they want. I like when he controls us sometime. It shows that he cares.

While some Thai students perceived teachers' control as a care, some did not like it because they believed they were mature enough to know what was right or wrong. Salukchit said she liked to have some freedom and she would obey the teacher if he respected her and treated her like an adult.

CONCLUSION

Dialectical theory is boundless and no unified perspective in dialectics provides a definitive set of axiomatic statements. As dialectical scholars do not aim to unify the consensus, the findings could not explain definite sets of dialectical tensions in intercultural classroom. Therefore, the dialectical tensions found in this study are not necessarily identical to dialectical tensions found in other contexts or even in other intercultural settings. Moreover, the same individual may encounter the same tension differently at different times. In order to understand the dialectical tensions, describing the tensions individually is not enough because it fails to represent how tensions impact one another. In the present study, tensions encountered by Thai students are interrelated. Two types of interdependence among contradictions, the vertical and horizontal relationships, are indicated in this study. The vertical relationship refers to the interrelation between the primary and secondary tensions while the horizontal relationship refers to the interdependence among secondary tensions. Primary tensions refer to the ones which are more salient in a dialectical system (Baxter & Montgomery, 2000). Although the separation/connection tension has been identified by most dialectical scholars as the most central contradiction (Baxter, 1988), the hierarchy/equality tension is found to be the primary contradiction in the present study because it

determines all of the rest. Hierarchy/equality affects the stability/change, openness/closedness, and distance/intimacy tensions. The hierarchical culture in Thailand might make Thai students perceive themselves as inferior so it is inappropriate for them to be open or intimate with their teachers. It affects active/passive tension because the hierarchy in Thailand creates one way learning from the top to bottom. Thai students are passive because they do not want to challenge the authority. It affects attention/distraction and compliance/resistance tension because if the teachers are perceived as an absolute power holder, students might be forced to be attentive and compliant or; conversely, they might feel distracted and resistant to that power. Finally, it affects the resentment/affinity tension because hierarchy and equality tension is an important factor to make the class enjoyable. The second type of interdependence found in this research is horizontal relationship which refers to the interrelation among secondary contradictions. The active and passive tension, for example, is related to the stability and change tension because Thai students are more interactive in a fluid class with flexible teachers. Also, the stability/change tension is related to the attention/distraction tension because students might be able to maintain their attention longer if the class is full of novelty. The separation/connection tension also impacts the openness/closedness tension because if teachers and students are more intimate, they tend to disclose themselves and be more honest.

The study of dialectical tensions Thai students have with their native English-speaking teachers in an intercultural classroom can expand our understanding of teaching and learning. Bringing internationality to Thai students is not an easy task. This study, therefore, implies several applications. For international universities, the results of this study are useful for the teacher preparation program. Preparation and training is important for native speakers who are pursuing their teaching career in Thailand. Realizing dialectical tensions, Thai students may encounter in an intercultural classroom, native speakers would come to the country with certain ideas of how to be successful in teaching. The study indicates that understanding of and adapting to Thai culture is essential for teaching Thai students. However, the international education standard is also crucial in an intercultural classroom. For Thai students who are going to study with native English-speaking teachers in an intercultural classroom or going to further international education, the results of this study would benefit them because they will know what native English-speaking teachers want, expect, and prefer them to be in a classroom. They will realize that the Thai culture and Thai education system they have been familiar with might cause a problem in their learning with native English-speaking teachers. Knowing potential tensions they would encounter can help Thai students prepare themselves before continuing their international education.

REFERENCES

Bakhtin, M. (1981). *The dialogic imagination*. Austin: University of Texas Press.

Baxter, L. A. (1988). A dialectical perspective on communication strategies in relationship development. In S.Duck (Ed.). *Handbook of personal relationships*. NY: John Wiley & Sons.

Baxter, L. A. & Montgomery, B. M. (1996). *Relating: Dialogues and dialectics*. NY: Guilford.

Baxter, L. A. & Montgomery, B. M. (2000). Rethinking communication in personal relationships from a dialectical perspective. In K. Dindia & S. Duck (Eds.), *Communication and personal relationships*. NY: John Wiley & Sons.

Fassett, D. L. & Warren, J. T. (2007). *Critical communication pedagogy*. CA: Sage Publications.

Hall, J. K., Vitanova, G. & Marchenkova, L. (2005). Introduction: Dialogue with Bakhtin on second land foreign language learning. In J. K. Hall, G. Vitanova, & L. Marchenkova (Eds.). *Dialogue with Bakhtin on second and foreign language learning: New perspectives*. New Jersey: Lawrence Erlbaum Associates.

Hammond, S., Anderson, R., & Cissna, K., 2003. The problematics of dialogue and power. *Communication Yearbook, 27*, 125-157.

Holquist, M. (2002). *Dialogism: Bakhtin and his world* (2nd ed.). NY: Routledge.

Keaten, J. A. & Soukup, C. (2009). Dialogue and religious otherness: Toward a model of pluralistic interfaith dialogue. *Journal of International and Intercultural Communication, 2*(2), 168-187.

Matusov, E. (2007). Applying Bakhtin scholarship on discourse in educationl: A critical review essay. *Educational Theory, 57*(2), 215-237.

Prentice, C. M. & Kramer, M. W. (2006). Dialectical tensions in the classroom: Managing tensions through communication. *Southern Communication Journal, 71*, 339-361.

Sidorkin, A. M. (1999). *Beyond discourse: Education, the self, and dialogue*. NY: State University of New York Press.

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EFFECTS OF SPATIAL AND NONSPATIAL CONTIGUITY PRESENTATION ON UNDERGRADUATE ART STUDENTS' CREATIVITY

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ABSTRACT

This study was conducted to determine the effects of using layering in Adobe Photoshop through two modes of presentation; spatial contiguity (SC) and nonspatial contiguity (NSC) among 60 undergraduate students with different cognitive styles. A quasi-experiment with 2 x 2 factorial design was employed whereby the independent variables consist of two presentation modes (SC and NSC); the dependent variable was the posttest mean score of creativity, and the moderator variables were the two cognitive styles of students (Field dependent/Field Independent) that were determined by the GEFT test. Results show that neither SC nor the NSC presentation mode has any effect on the students' cognitive styles. FI students tend to gain from the use of spatial contiguity compared to the nonspatial contiguity as for the FD students. FD students especially need to be more attentive to the details in the visual given so that they can gain better skills to create and design photos. Using spatial contiguity is only one of the instructional multimedia principles that was used in this study to determine students' creativeness in using layers within Adobe Photoshop.

Keywords: Adobe Photoshop, spatial contiguity, nonspatial contiguity, cognitive styles

INTRODUCTION

Computer technology has placed high expectations in the teaching and learning of art education. Art teachers are expected to use computers as a tool to assist students to develop a strong foundation in creative computer graphic skills. According to Sabieh (2000), computers when exploited properly, can enhance teacher's teaching and promote students learning. Likewise, Heaston, and Bedell (1998) believe that technology will play a key role in helping students develop the ability to think and act in a creative environment while Ghazzawi (2002) confirms that computer is the best tool used in the process of teaching and learning and has enormous potential that is not confined to one machine or limited to one educational method.

Computers can play an important and effective role in the field of design and decoration. In particular, restructuring or redesigning images, through the computer's potential, will allow the user to apply a new and prompt way of thinking through the analysis of ideas. It would also help the student to continue the flow of ideas and choose the best solutions. The use of layers within Adobe Photoshop affords the student to do just this. Adobe Photoshop CS3 is distinct because it works with layers with the possibility of putting pictures or designs on various layers that can control the final output. Hence, students are able to play with their own design creativity. Besides creativity, two cognitive styles were identified that may have an effect on the way students learn Photoshop. With regards to this, another aspect that could contribute to learners' acceptance of the learning method is through spatial contiguity mode.

Therefore, the focus of this study was to determine the effectiveness of layers within Photoshop and artistic creativity among students with different cognitive styles. In consequence, the research objectives are:

1. To determine the effects of using Photoshop in increasing students' creativity in photo design;
2. To find out whether there is any significant differences between students using spatial contiguity (SC) and nonspatial contiguity (NSC) presentation modes; and
3. To determine whether there's any difference between field dependent (FD) and field independent (FI) students using SC and NSC presentation modes.

THEORETICAL FRAMEWORK

Based on the instructional systems design (ISD) models by Alessi and Trollip (2001), Gagné's (1985) nine events of learning, and the spatial contiguity principle advocated by Mayer's (2001) cognitive theory of multimedia learning, two versions of a multimedia courseware were designed and developed on the topic Custom Shape Layers using Authorware version 7.0.

Figure 1 depicts an overall research framework for the study that considers Mayer's (2001) cognitive theory of multimedia learning, Gagne's (1985) nine events of instruction, and Torrance's (1984) theory of creativity. Meaningful multimedia learning takes place when the multimedia messages are constructed according to how learners' information processing system works. With this in mind, the application of the spatial contiguity and nonspatial contiguity presentations in this study is hoped to produce meaningful learning through the learners with different cognitive styles on students' creativity.

In the cognitive theory of multimedia learning (Mayer, 2001), the three theories that were based upon were the dual-coding theory (Paivio, 1986), working memory theory (Baddeley, 1999), and cognitive load theory (Chandler & Sweller, 1991; Sweller, 1999). From these theories, Mayer presented three assumptions that explain how people learn that includes the dual channels, limited capacity, and active processing assumption as summarized in Table 1.

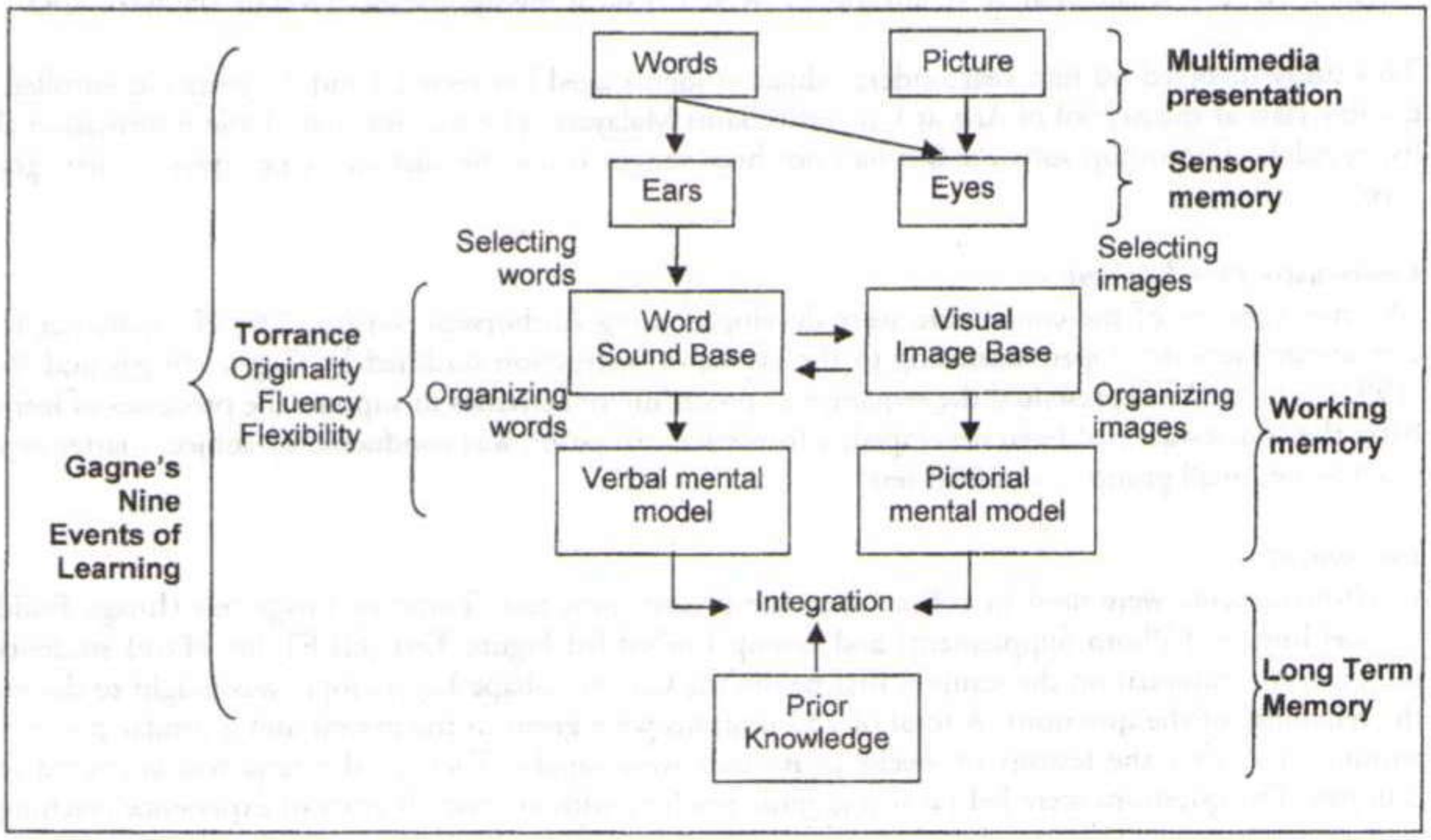


Figure 1. Research framework (adapted from Mayer's cognitive theory of multimedia, 2001)

Table 1
Three Assumptions of the Cognitive Theory of Multimedia Learning

Assumption	Description
Dual channels	There are two separate channels in humans for processing visual and auditory information.
Limited capacity	Humans can process a limited amount of information in each channel at one time.
Active processing	Active learning occurs when relevant and selected information is organized into understandable mental representation that are integrated with other knowledge

Source: Mayer (2001)

The first six instructional events (gaining attention, informing the learning objective, stimulating recall of prerequisite learning, presenting the stimulus material, providing learning guidance, and eliciting performance) were used to develop the activities in the courseware. The other three (providing feedback, assessing the performance, and enhancing retention and transfer) were incorporated during the deliverance of the lesson. Nevertheless, Torrance (1984) describes creative thinking as it happens in the process of sensing difficulties, problems and gaps in information and missing items. He provides five norm-referenced components of fluency, originality, abstractness of titles, elaboration, and resistance to premature closure to assess students' creative level. In this study, originality, flexibility, and fluency were considered.

METHODOLOGY

The research methodology focused on the effects of Adobe Photoshop with spatial contiguity (SC) and nonspatial contiguity (NSC) presentation modes (independent variables) on the artistic creativity among students (dependent variable) with field dependent (FD) and field independent (FI) cognitive styles (moderating variables). Thus, a 2 x 2 quasi-experimental factorial design involving one-way analysis of variance (ANOVA) and analysis of covariance (ANCOVA) at the significance level of .05, were used.

This study involved 60 first year undergraduate students aged between 19 and 21 years old enrolled in a graphic class at the School of Arts at Universiti Sains Malaysia. The students have basic information about using Adobe Photoshop software but had not been taught using the custom shape layers in their graphic class.

Courseware Development

The two versions of the courseware were developed using Authorware version 7.0. The activities in the courseware were developed according to the events of instruction outlined by Gagne, Briggs and Wager (1992). The events represented the sequence or procedure of activities to support the processes of learning. After the courseware had been developed, a formative evaluation was conducted by subject matter experts, one-to-one, small group, and a field test.

Instruments

Four instruments were used to collect data; the pretest, post test, Torrance Image test (Image Building, Parallel lines and Photo Supplement) and Group Embedded Figure Test (GEFT for FD/FI students). A pretest was conducted on the samples first before the Custom Shape Layers topic was taught to determine the reliability of the questions. A total of 25 questions were given in the pretest and a similar posttest was administered after the lessons (3 weeks treatment) were taught. Each of the tests was answered in 40 minutes. The questions were led by two graphic teachers with at least 10 years of experience teaching the

graphic and design subject together with the researcher. All the 25 questions in the pretest were repeated in the post test except for the difference in the sequence of the questions.

The Torrance image test of creative thinking, which consists of three activities was used. The first activity is a composition of an image or theme created by the students on a shape that was provided by the researcher. The students had to form a partial or full image and provide a creative title to be placed at the bottom of the page. The students' creativity was graded based on originality and authenticity of the title. The second activity complemented the first; addition of lines of incomplete forms, topics, or to draw a creative and interesting images that convey a story build upon the first idea. The created image was graded based on the three dimensions: fluency, flexibility, and originality. The third activity is independent of the second activity. The student has to compose an object on the image between parallel lines. The students were graded based on the three dimensions and sub-dimensions.

DATA ANALYSIS AND RESULTS

Sixty students from the School of Art participated in this study. Before the start of the class, GEFT and a pretest were administered to the students. The mean GEFT score was 19.35, with a standard deviation of 4.35. Samples were distributed into presentation modes, SC = 31 (16 FD, 15FI) and NSC = 29 (14 FD, 15 FI). In the pretest, students following the SC had a mean score of 51.94 while the NSC was 51.66, where F (1,58) = 0.016, p = 0.89 >0.05, indicating no significant difference in the pretest mean scores in both the presentation modes.

Comparison of post test means score, presentation modes, and cognitive styles. Findings showed that the FD students using the SC mode obtained 53.56 in the posttest means score, a score higher than FD students using the NSC mode (49.36) (Table 2). The FI students using SC mode obtained 53.73 in the posttest means score, a score higher than the FI students using the NSC mode (52.07). Comparing the posttest mean score for students using the same presentation modes in their difference cognitive styles, the FI students using the SC mode obtained (53.73) in the posttest score, a score higher than the one obtained by FD students using the same presentation mode. The FI students in the NSC mode obtained a mean of 52.07, a score higher than the FD students using the same presentation mode (49.36). This also shows that the posttest overall mean score of students using the SC mode is higher than the posttest mean score of students using the NSC mode.

Table 2
Posttest Means Score

Presentation mode	Cognitive style	Mean	Standard deviation	N
SC	FD	53.56	7.72	16
	FI	53.73	9.11	15
	Total	53.65	8.28	31
NSC	FD	49.36	9.83	14
	FI	52.07	5.93	15
	Total	50.76	8.03	29
Total	FD	51.60	8.87	30
	FI	52.90	7.60	30
	Total	52.25	8.22	60

Correlation between the pretest and posttest scores. The results confirmed that there is a significant correlation between the pretest and posttest mean scores (r = .953, p < .05). The Pearson r correlation of

.95 indicates a highly positive relationship between pretest and posttest scores. For that reason, an analysis of covariance (ANCOVA) was applied in this study to determine the effects of the independent variables (presentation modes) and the moderators (cognitive styles) on the dependent variables (posttest scores).

Presentation modes and cognitive styles. The results for the main effects of the presentation modes show that there is no significant difference in the posttest means score in both the presentation modes [$F(1,60)= 0.27$, $0.14>0.05$] (Table 3).

Table 3
Two-way ANCOVA on the Posttest Means Score of Presentation Modes and Cognitive Styles

Source	df	Mean square	*F*	*p*
Presentation modes	1	7282.95	2.29	.14
Cognitive styles	1	877.28	.28	.60
Presentation modes * Cognitive styles	1	111.03	.04	.85
Total	60			

As for the main effects of the cognitive styles, the result indicates that there is no significant difference in the posttest score of the students with different cognitive styles [$F(1,60)= 0.04$, $p = 0.60>0.05$].

Presentation modes and FD students. The result also indicates that there is no significant difference in the posttest means score of FD students in both the presentation modes [$F(30,29) = 1.615$, $0.1 > .05$]. However, the posttest means score for NSC (X = 16.15) is less than the SC (X = 19.72). Therefore, the results indicate that the posttest means score of FD students using NSC mode is significantly lower than the FI students using SC.

Presentation modes and FI students. The one-way ANCOVA of presentation modes and FI showed that there is no significant difference in the posttest means score of FI students in both the presentation modes [$F(30,29) = 1.434$, $p = 0.167> .05$]. Using the pretest scores as a covariate, the posttest means score for SC mode (X=18.473) is higher than the NSC mode (X=17.400). Thus, the results show that the posttest means score of FI students using the SC mode is significantly higher than the FI students using the NSC mode. By using a two-way ANCOVA, the result indicates that there is no significant interaction between the presentation modes and the cognitive styles of students in the posttest score [$F(1,60= 0.035$, $p = 0.85>0,05$].

Testing the Hypotheses

Difference in post test means score for students using SC mode and using NSC mode.
Students using NSC mode obtain a lower posttest means score (X=50.76) compared to the students using the SC mode (X=53.65). The ANCOVA results indicated that there is no significant difference in the posttest means score in both the presentation modes [$F(1,60)= 2.29$, $p = 0.14>0.05$]. Therefore, the hypothesis is supported.

$H_0$2 There is no significant difference in post test means score for FD students and FI students in the both the presentation modes.
For both presentation modes, the posttest means score obtained by FI students (X=52.90) is higher than the post test means score obtained by the FD students (X=51.60). The ANCOVA results revealed that

there is no significant difference in the posttest means score of students with different cognitive styles [$F(1,60)= 0.275$, $p = 0.60>0.05$]. Therefore, the hypothesis is supported.

H_o3a There is no significant difference in post test means score for FD student using the SC and FD student using the NSC mode.

The posttest means score obtained by FD students using NSC mode (X=49.36) is lower than the FD students using the SC mode (X=53.56). The ANCOVA results also show that there is no significant difference in the both the presentation modes [$F(30,29)= 1.62$, $0.1>0.05$]. Thus, the hypothesis is supported.

H_o3b There is no significant difference in posttest means score for FI student using the SC mode and FI student using the NSC mode.

The posttest means score obtained by the FI students using the SC mode (X=53.73) is higher than the FI students using the NSC mode (X=52.07). The ANCOVA results revealed there is no significant difference in the posttest means score obtained by the FI students using both the presentation modes [$F(30,29)= 1.43$, $0.18>0.05$]. Therefore, the hypothesis is supported.

H_o4. There is no interaction effect in pos ttest means score among the modes of presentation and the cognitive styles.

Result shows that there is no significant relationship between the students cognitive styles and the presentation modes on the posttest means score [$F(1,60)= 0.035$, $0.85>0.05$]. Therefore, the hypothesis is supported.

CONCLUSION

This study shows that neither the spatial contiguity nor the nonspatial contiguity presentation mode has any effect on the students cognitive styles. FI students tend to gain from the use of SC compared to the NSC as for FD students. However, the results may prove otherwise if the subject matter is of a different area. Nevertheless, the study would be of interest to others and researchers should be aware to select appropriate visuals to depict exact description in the text. Extraneous descriptions shown in either the spatial contiguity or nonspatial contiguity should be excluded so as not to distract the comprehension of the text. Further, teachers who plan to apply spatial contiguity mode by using visuals and text in a graphic design lesson should be able to identify the appropriate pictures to be used to supplement the written text and to identify the position as to where the video clips should be segmented so that the understanding of the reading text can be increased. Visuals used should help students to enhance their comprehension and should not further confuse the students unnecessarily as reading comprehension itself is a complex and difficult skill faced by many students.

Students especially the FD, need to be more attentive to the details in the visuals given so that they can gain better to create and design photo. Using spatial contiguity is only one of the instructional multimedia principles that were used in this study to determine the students' creativeness in using layers within Adobe Photoshop. There are other factors that are more or equally important in helping students to increase their creativity such as cognitive styles, the characteristics of the students and other instructional media that can be applied in a graphic design lesson. Therefore, other strategies need to be tried and tested so that all students can hope to increase their creative on different field.

REFERENCES

Alessi, S. M. & Trollip, S. A. (2001). Multimedia for learning: Methods and development (3rd ed.). *Massachusetts: Allyn and Bacon.*

Baddeley, A. (1999). *Human memory.* Boston: Allyn and Bacon.

Baddeley, A. (1992). Working memory. *Science, 255,* 556-559.

Chander, P. S. & Sweller. (1991). Cognitive load therory and the format of instruction. *Cognitive and Instruction, 8,* 293-332.

Gagne, R., Briggs, & Wager. (1992). Principles of innstructional design (4th ed.). *USA: Addison-Wesley Educational Publishers Inc. .*

Gagne, R. (1985). *The condition of learning and theory.* New York: *CBS College Publishing.*

Ghazawi, M. (2002). Designing educational software and calculated to examine their impact and the impact of variable movement in the collection of sixth grade students to some basic concepts of pilgrimage. *Journal of Educational and Psychological Sciences.*

Heaston, A. & Badell, J. (1998). Creativity, children and technology. *ERIC Document Reproduction Service. No. Ed 1280142.*

Mayer, R. (2001). *Multimedia learning.* UK: Cambridge University Press.

Pavio, A. (1986). *Mental representations: a dual coding approach.* New York: Oxford University Press.

Sabieh, C. (2000). *Computer assistance the solution to enhance learning. Paper presented at the Non-Governmental Higher Education Conference.* Queen Arwa University, Sana'a, Yemen, May30-June1.

Torrance, E. (1974). *Norms and technical manual: Torrance tests of creativity thinking.* Bensenville, IL: Scholastic Testing Service.

CULTURE-BASED SECOND LANGUAGE TEACHING-LEARNING: SHARING EXPERIENCES IN LEARNING ESPAÑOL AND BAHASA INDONESIA

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ABSTRACT

In the midst of my experience as a teacher of language and literature and within the challenge of a globalizing world that compels cultural perspectives especially in social/qualitative researches, I always fall back on my own experiences as a learner of two second languages (aside from English) - Spanish and Bahasa Indonesia - in two separate geographical spaces and purposes (at the Instituto Cervantes in Manila as a prerequisite for PhD comprehensive exam for the former; and in Yogyakarta, Central Java, Indonesia, for research and translation, for the latter). Realizing that the methods of my former teachers in both languages were basically culture-based, I have always adopted this concept and method in teaching English (and literature) and in doing action and social researches. Students' (or in research, subject-respondents') cultural milieus should strongly serve as the anchor of teacher's teaching-learning strategies and approaches; and in research, an enhanced methodology and strengthened findings and conclusions. These experiential insights aim to serve a two-fold purpose: a more concrete and institutionalized approach for an easier and more effective second language/s learning-teaching; and a laying out of common trajectories of second-language acquisition as an indispensable tool for research.

Keywords: Second language, Spanish, Bahasa, teaching English, teaching-learning strategies

INTRODUCTION

True to the paper's nature - which is insightful and experiential - it is best to introduce the discussion by quoting something from two authorities on story-telling and narration: "A narration is a reflexive act, that is, in the process of telling a story, the narrator automatically and almost simultaneously reflects on what s/he is saying. Through this reflection, one acquires an understanding of her/his life of certain behavior in the past or of whatever is being narrated..." (Lange, 1999). In ethnography, this approach of narrating is essentially what and how ethnography is all about: It is an 'observation of culture *in situ*' (Massey, 1998) and 'telling the stories of the community' (Woods 1994:311).

Although this paper may not be focusing on the life of the "narrator" --- the teacher-learner of second language ---- it deals with the "story" of her experiences as a learner and teacher of language and literature. It is in this context that I take the concept of story-telling and narration. Because this write-up basically comes from my own experiences and/or insights as a learner and as a teacher of second language, I liken this process of sharing this as a narrative act; my insights and realizations from it self-reflexive. The stories

of the community being shared here are the collective tales of the community of teachers and learners in the field called classroom (and beyond physical classroom) within the framework of my own experiences.

I have been teaching English and Literature for more than 20 years now. In general, in most of these years that I have been handling these subjects, I always applied what I dubbed as culture-based language and literature teaching-learning process. This "culture-based" orientation is what I deem as the realization of what I have learned from my own teachers/professors in my second-language/foreign language learning. I refer to the languages, Spanish (Español) and Bahasa Indonesia. I took the first language in the course of my requirement for Comprehensive Examination that would lead to my dissertation (for PhD Comparative Literature at the University of the Philippines, Diliman in 2002. I took up Español at the Instituto Cervantes, Manila, for two semesters in 1998 to 1999. I took the second language (Bahasa Indonesia) as a grantee of the Southeast Asian Studies Regional Exchange Program (SEASREP) in January to June 2006, at the INCULS (Indonesian Culture and Language Learning Services) at the Universitas Gadjah Mada (UGM), Yogyakarta, Indonesia.

"Culture-Based" Teaching-Learning: "In Situ"

When culture is being tackled, one will inevitably deal with people. Spradley (1990) defines culture as the totality of the people's aspirations, dreams, worldviews, goals, beliefs, among others. Because it consists of these facets of people's lives, culture deals with construction, a subjective participation of each composite. This construction could be made up of smaller or bigger entities. Thus, it deals with the "text" within, or what ethnography calls, the text "in situ" or *in site*. The site that I deal with as a learner as well as a teacher of second language is a composite of the class either within the classroom or outside. The people teaching and learning the language become a specific case in point. They are both subjects as well as participants to the whole second-language teaching-learning experience. All of them are immersed in the "in situ" culture. The cultures of both the source text as well as that of the target text are embedded in the topics as well as the methodologies.

This in situ context then, connotes a process of learning within the field. This field, that may or may not be inside the classroom, is a laboratory of teaching-learning process. In most cases, this process becomes a means of bridging cultures between the source culture and language and the target culture and language. As Chinua Achebe believes in literature, this process also serves as "a means of negotiating the … cultures to achieve a solid and positive sense of identity" (Sofield, 1999). I believe that like in ethnographic methodology of triangulation, the teacher, the students, and the cultural artifacts being studied and/or considered, second-language teaching-learning process is also culturally ethnographic: It involves both the teacher's and the students' active participation and also the availability of the cultural artifacts and/or cultural materials being learned inside or outside the classroom.

I wish to put into context the assertive stance of second language learning today. It is no longer the inactive process that used to exist in the classroom. It used to be a very structural way - that is, focusing on the grammar alone or spelling alone. Even the process itself used to be very cold and structured. The teacher would ask the students questions then the students would answer them. The teacher would roam around the classroom and "inspect" the students' activities.

One paper I presented in Indonesia in January 2008 (Balares-Salamat, 2008) primarily revolved around the expansion of the notion of a literally-borderless literature teaching and learning and how this *field* comes in. The following is a statement that may have an indirect relation to second language teaching-learning:

Literature is so unlike that of yesteryears; it is both classroom and outside. It is 'field' itself, or entails

fieldwork. It requires a hands-on experience by, for, and with the people in the culture-community. Therefore, it revolves around the participative influence of people. This back-to-back relationship demands the active participation of the self, of the writer of the ethnographic-cum-literary process.

Teaching-Learning Second (Foreign) Language

Unlike the teaching-learning process of the first language, the teaching-learning process of any second language is more difficult and challenging to both the teacher and the learner. There is the existence of barriers as there is the existence of both source language and culture and target language and culture to consider.

Because of the advent of technology and the continuous exposure of students to different methods and approaches, second-language teaching-learning process is no longer confined in this "four-cornered" classroom. The field may be outside the classroom, in the community or in the feeding center of the school. This process then is a counter-approach to the traditional notions of language teaching and learning and, therefore, has an adherence to the present concept of disciplinary interconnectedness and multiplicity. While the subjects (students or classes) year in or year out may be the same, the process or methodologies adopted are different. Being so, the particular methodologies used recognize the personal and the subjective, as what Alsop points out, the "personal in view of the cultural".

This "personal in view of the cultural" dynamism is what I attach to the ethnographic process called *self-reflexivity*, now an accepted approach to research and instruction, being always associated with 'reflections.' An ethnographer can never adopt some form of reflexivity unless s/he first undergoes different levels of reflections --- perceptions, intuitions, and empathy - of and towards her cultural text, her methodology, and her overall data gathering (Alsop, 2002). Hence, the teacher learns to become "self-reflexive", meaning tries to take a closer look at his/her own perspective as s/he looks at others' views (his/her own students'). Alsop calls this the process of *auto-ethnography* - on how one 'places the self within a social context by connecting the personal and the cultural.

I refer to myself when I refer to "teacher" in this context. I was already a language and literature teacher before I studied the two second foreign languages in question, that is, Spanish and Bahasa Indonesia. The way I learned the strategies or innovations that my professors in these languages adopted has been my guiding elements in the improvement of my own teaching strategies and techniques. I taught my own, traditional way, I learned, I innovated. In other words, the teaching techniques before, as well as the strategies that I learned from my professors, complement together and serve as my teaching innovations nowadays. Indeed, it is true that nothing is ever exactly the same.

In the following discussion, I put emphasis on the teaching strategies that I learned, then later and now applied, in my own language and literature teaching.

Learning Español and Bahasa Indonesia: My Own Experience

As mentioned earlier, I studied Español for my PhD requirements and Bahasa Indonesia for a possible translation undertaking later. I learned two levels of Spanish at the Instituto Cervantes in Manila and Bahasa Indonesia at UGM, Yogyakarta, Indonesia. I learned these two second (foreign) languages in two separate places and separate time lines. It should be noted that each of these language curricula would have the four communicative competence skills, such as speaking, listening, reading, and writing. Each professor would focus on these skills every session/meeting. While I was learning these two languages, I was foremost a person who needed to assume two roles: that of doing the assigned tasks as a student, while at the same time, observing activities that could possibly be replicated in my own teaching exposures.

METHOD/ACTIVITIES

Although I learned Español in its language arm (institute) in the Philippines, the teaching-learning techniques were the same as within the cultural context (Bahasa). I learned Bahasa Indonesia in a place that is considered to be "the cultural seat" of Central Java in Indonesia. With these differences in venues and time, however, I noticed that the major activities, and techniques were geared towards culture-based teaching-learning methodologies.

Visit to cultural places. In my study of Spanish, the focused places were those that were related to the history of the Spanish relationship with the Philippines. Intramuros was one unforgettable place of discussion. Professors would also show DVDs and films about historic places in Spain. Alongside this, the Instituto Cervantes always had free tickets (passes) for students to watch plays at the Cultural Center of the Philippines (CCP) or Spanish films at the same venue (Instituto).

I also particularly liked when our professors in Bahasa Indonesia would titillate us through pictures, films, and videos, about Borobudur (the ancient Buddhist temple in Indonesia) and Prambanan (a counterpart Hindu temple) in Central Java.

Buying and selling basic items. Our professors would devise activities in the class that would make us pretend to buy and sell basic items or foodstuff in the market. The local ingredients and foodstuff would definitely be learned through these "pretend" activities. Each of the students would try to play the role of buyer or seller.

Identifying and eating indigenous fruits, vegetables, and recipes. Related to the previous activity, this one would be more enjoyable as it would be a *picnic* kind of activity. The professors would bring endemic fruits and vegetables (Bahasa) and local recipes (Spanish). As students, we would identify first the fruits, vegetables, and recipes, and later on, would eat them with pleasure. The professors would continually ask students the names and features/characteristics of each while they were enjoying the food inside the classroom. In this manner, the classroom would be turned into a small feast.

Sketching local streets and roads. Apart from the sketches painstakingly made by the professors for their students, actual assignments and activities would compel students to go out and find for themselves the local streets and roads. Finding the right route would be a challenging task (especially in Indonesia) because aside from students' being new to the place, using basic language registers for the places or streets would also take time. Students would be able to converse with native speakers of the language and further enhance their rapport and language skill acquisition.

Reading local folklore and/or literature. Benefiting from the big help of reading in language learning, professors in both languages in question introduced us, students, to the world of literatures in their respective countries. Films about "Don Quixote," for instance, would be shown, not only for us to understand the vocabulary of Spanish language, but also to immerse us in the Spanish culture. On the other hand, myths of local culture in Indonesia, especially in Central Java, would serve as springboard to an understanding of the target culture. Then, we were introduced to the psyche and ethos related to the princess' attitude especially on people wearing green (emerald) in coming to beaches, for example. Here, the folklore telling us about the men who got drowned when they would wear green shirts as they would be taken by the princess of the sea or ocean in Central Java, would be a passage to the hair-like separation of myth and reality.

Local color, local flavor. As it was impossible for students in the Instituto Cervantes to go to Spain for the language course (of course others who were more financially privileged pursued their courses in Spain right after their Instituto Cervantes courses), we were exposed to local "color and flavor" through operas and arias of this country. Every couple of weeks, the Center would allow or invite us to see, listen to, and enjoy, the singing sensations of Spanish performers that would actually roam around the world for cultural activities sponsored by the government. We would have the benefit of listening to beautiful arias of Spanish singers and the prodigious piano skills of other Spanish musicians.

The INCULS, which served as the center of the Bahasa Indonesia studies, would also sponsor activities with cultural flavor. A few of the things this Center hosted were the "tari jawa" (Javanese dance), "batik-making," community visit and immersion, among others. The students could sign up for each or all of these. Since these activities were held during Fridays and Saturdays, the students would enjoy their lessons or exposures while continuously learning about the language inside the classroom during the earlier weekdays. In this manner, their cocurricular activities gave them more chances to apply the vocabulary, culture, and skills that they acquire inside the University Center through their workshops and community exposures.

This particular Center also organized tutorial sessions with native speakers as tutors and the international/foreign students as tutees. The tutors and tutees were encouraged to perform the sessions in actual cultural scenarios, instead of limiting themselves only in the confines of the University. In this way, the tutees (foreign students) had direct and easy access to the second-language facility.

Cultural Exposures: A Perk to Language Learning

All these activities and more helped students of the target culture and language to easily recall vocabulary, grammar, speak the language with native speakers, read more literary books, and listen to people with "target culture-and-language" way. These techniques never forced the learners to study the language in a very rigid-cum-structured way, but in a light and enjoyable manner.

The learners of the target culture-and-language also appreciated the culture of this used-to-be-foreign language. Their "field" activities, together with their actual classroom lessons, complemented each other to realize a culture-based learning process. The field became both literal and figurative. This field served as the "in situ" context of teaching-learning foreign language.

The Language Student Now a Teacher Adopting a Culture-Based Concept

With the skills and realizations acquired while learning the two languages in question, I, as a teacher, have adopted, and continuously adopt similar activities and techniques. In my language and literature classes, I give much premium on performance. *Performance* in this aspect denotes and connotes performance beyond the classroom discussions. This term comes in handily as a two-fold concept. It is articulated through the daily performances of students through collage-making, oral and choral interpretations, cooking Bicolano/Filipino food and critiquing it, essays/reflection papers, and song compositions. This performance serves as a bridge towards a set of multiple/complex meanings that transcend individual identifications. Then it also manifests itself through the actual, literal performance of the students during culminating activities before are taken into account.

I let my students cook Bicol food and perform cultural songs, riddles, proverbs, among others, in the study of language and literature (vernacular). I let them perform and modify songs according to their own liking and interest. All these activities serve to make classes enjoyable and culture-oriented. In the English

classes, students also get to perform Shakespearean plays, or play instruments used by English/American musicians, for them to better appreciate the subject matter. In this manner, the students learn language within the parameters of the target culture and language.

METHODOLOGY OF RESEARCH

It is noteworthy that one possible prospect of learning these two languages - one Asian and one European - is how they can be collaborative and complementary. While it is true that Indonesians were under Dutch rule for many years, their language has been mainly Malay or Asian (although a lot of vocabulary comes from the Dutch language).

After discussing the areas and ways by which the second-language teaching-learning process takes place in my actual experiences as a student as well as a teacher of language and literature, I recommend towards a prospective engagement of these two languages in question --- Español and Bahasa Indonesia. Later ventures might lead to something bigger about learning these two languages. One tangible way is engaging students on the historical and cultural importance of each countries - one in the context of a colonized country (Indonesia, by Dutch) and another in the context of a colonizer (Spain, having colonized one major neighboring Asian country, the Philippines). More so, my action, educational, social science researches that deal with cultural texts all the time, would also be a potent focus on how studying the culture and language of the people in situ is an indispensable effort in research. Hence, I am recommending further studies on the effects of culture-based research data collection or analysis in my own research activities.

CONCLUSION

Learning these two languages in question has been a great advantage for me as a teacher. Teaching second or foreign language is interesting; teaching it with former experiences as a learner is all the more interesting and enjoyable. Playing both learner and teacher serves as a balanced act in teaching.

True to Clifford's concept of "transcription" or "re-inscription", I am able to "invent" or create something out of my own experiences as a learner (student). Not only do I derive meanings from my own text but also optimize my methods and techniques to attain the best of my teaching experience. By doing so, I am able to further "read" and "write" the texts (like classroom -cum-laboratory activities) as a total performance which I am able to relate to others through a "story-telling" like this. My students, myself as a teacher-learner, and the sociocultural artifacts, become a community of these stories.

REFERENCES

Alsop, C. K. (2005). Home and away: Self-reflexive auto/ethnography. *Forum Qualitative Sozialforschung /Forum:Qualitative. Social Research.* Retrieved from http://www.qualitative-research.net/fqs-texte/3-02/3-02alsop-e.htm

Balares-Salamat. J. F. (2002). *Literature in ethnography, ethnography in literature: Reading* and *writing the cultural text mission ni Lola.* 17, 249-257. Doctoral dissertation, Quezon City.

Cervantes, I.(n.d.). Retrieved July 20, 2010, from http://www.manila.cervantes.es/.

Clifford, J. (1986). 'Introduction: partial truths.' in James Clifford & George Marcus (eds). Writing culture: the poetics & politics of ethnography 1-13. Berkeley: UCLA.

Ethnography in literature; literature in ethnography. (2008). Seminar of 'Culture, language, and literature in global context' at the 2nd International Seminar on Culture, English Language Teaching & Literature, Soegijapranata Catholic University, Semarang, Indonesia, 16-17 January 2008.

Ethnography in literature; Literature in ethnography. (2008). *Proceedings of the 2nd International Seminar on Culture, English Language Teaching & Literature*, Soegijapranata Catholic University, Semarang, Indonesia, 16-17 January 2008. Riyandari, A, G. M. Adhyanggono & H. Hartono (eds.) Semarang, Indonesia: Faculty of Letters Soegijapranata Catholic University.

Inculs. (n.d.). Retrieved July 20, 2010, from http://www.inculs.or.id/

Lange, N.T. (1999). A sociological study of marital roles and marital stability of Filipino-German mariages: Some reflections on methodology. *Selected Readings on Health and Feminist Research: A Sourcebook*. Ed. Sylvia H. Guerrero, Quezon City: U Center for Women's Studies.

Massey, A. (1998). "The way we do things around here": The culture of ethnography, paper presented at the conference, 'Ethnography and education' at the Oxford University Department of Educational Studies (OUDES), 7-8 September 1998. Retrieved from http://www.voicewisdom.co.uk/htm/waywedo.htm

SEASREP; SEASREP Grants (n.d.). Retrieved July 20, 2010, from http://www.seasrep foundation.org/grants.html.

Sofield, H. (1999). *Postcolonial Identity, Postcolonial Literature, English 119*. Brown University. Retrieved from http://www.scholars.nus.edu.sg/landow/post/zimbabwe /sofield/6.html

Spradley, J. & McCurdy, D. W. (1990). *Conformity & conflict: readings in cultural anthropology* (7th ed.). New York: Doubleday.

Woods, P. (1994). Collaborating in historical ethnography: researching critical events in education. *International Journal of Qualitative Studies in Education*. *7*(4), 309-321.

THE DIMENSION OF PERSONALITY AND PERFORMANCE RELATIONSHIP OF LECTURERS IN SURABAYA

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ABSTRACT

Lecturers are important asset of a Higher Education Institution (HEI). They become one of key factors for the success of institution governance. Knowledge and understanding on factors/dimensions of personality that affect lecturers' performance will be very important to their empowerment. The research is aimed to explain the relationship between personality dimensions and performance of lecturers. The dimensions include ability, organizational commitment, professional commitment, job satisfaction, and motivation. The population consists of lecturers from state and private HEI in Surabaya. The samples were taken using purposive random and analyzed using bivariate correlation. The result indicates that personality dimensions do not have significant relation to the lecturers' performance, except for the ability variable. Based on the Theory of Expectations, the weak relationship of those variables is associated with the low expectation on reward and reflected in their low welfare. This becomes their reason to find side-job. The strong relation of ability to the lecturers' performance is due to the government regulation that requires better qualification of lecturers. The implication of this research is the improvement the top management should make to raise the lecturers' motivation for a better performance in the future.

Keywords: Commitment, professional commitment, job satisfaction, motivation, performance

INTRODUCTION

Today's globalization era requires all sectors to face global competition, as well as higher education in Indonesia. Understanding the key success to each sector is strategic and also important in order to maintain continuity. Thus, understanding the human resource management of lecturers in education institution, which is the key success for its governance, becomes a strategic issue for management of those institutions. The management of each education institution should consider on lecturers' strategic position as the key factor for those institution and place more attention on factors affecting their performance. There are many studies of personality dimension that include ability, organizational commitment, professional commitment, job satisfaction, and motivation in their relationship to performance. Previous studies reveal that each dimension of personality could be used to predict the success and it is related to the high performance (Harrel & Stahl, 1984; Jiambalvo, 1979). Ross and Ferris (1981) have found the strong support for the quality of institution and the educational level to predict performance. Ferris and Larcker (1983) found the joint relationship of variables (college CPA, highest academic degree attained and school attended) that are significantly related to performance. The national survey of AICPA (1998) in United States found that female employees with kids were facing more barriers in their carrier development compared to male employees.

The previous studies mentioned above were used as basis for this study, to test whether the dimensions of personality are related to the lecturers' performance. The objective of this study was to find empirical evidence that can be used by the institution's management to optimize their lecturers' human resource. The population of the study was limited only to lecturers in Surabaya, with the sample determination using purposive random sampling method.

THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

The basic theory used in the study is the Expectation Theory developed by Kurt Levin and Edward Tolan (1930). The theory states that someone would be driven to do a certain action if there is an expectation that a specific reward would be taken resulting from that action. Thus, based on this theory the lecturers will have a better performance if there is clarity of reward from doing a specific action. Observing the personality dimensions, a lecturer will have a high ability, organizational commitment, professional commitment, job satisfaction, and motivation if there is a hope that he or she will get something in return from his or her action. The high personality dimension would be reflected in his or her better performance. There are five dimensions of personality tested in this study: ability, organizational commitment, professional commitment, job satisfaction, and motivation which were hypothesized to be related to the lecturers' performance.

THE MEANING OF PERFORMANCE AND ITS MEASUREMENT

Performance is a description about the achievement of carrying out an activity, or a program, or a policy to give shape for organizational vision, mission, and objective, which is covered in the formulation of organization's strategic planning. Performance measurement is a managerial tool to improve the quality of decision making and accountability (Bastian, 2001). Performance is a result of what have planned, by person, group, or organization. A good performance is achieved if the result is the same or even higher than what have planned. Otherwise, it is a poor performance. Sedarmayanti (2004) explained that performance is a note of achievement from a certain work function or activity during a certain time period. Whittaker (1993) explicitly stated that performance measurement is a managerial tool to increase both the quality of decision making and accountability. Performance measurement is also used to value the achievement of goals and objectives.

The evaluation of lecturers' performance is aimed to examine the implementation of their primary duties covered in the "Tri Darma Perguruan Tinggi". Those duties consist of education, research and scientific development, and community services, which are reflected on each lecturers' rank as a proxy of their performance measurement. Those are measured by the number of articles that have made, the number of researches that have carried out, and the number of community services that have conducted during their work period.

Previous study revealed that each personality dimension (i.e. ability, organizational commitment, profesional commitment, job satisfaction, and motivation) could be used to predict the success and it is related to the high performance (Harrel & Stahl, 1984). Ross and Ferris (1981) found the strong support for the quality of institution and the educational level to predict performance. Jiambalvo (1979) concluded that the dimension of personality that is related to performance is used to predict the carrier success in a public accounting firm. Ferris and Larcker (1983) found the joint relationship of variables (college CPA, highest academic degree attained, and school attended) to predict performance. AICPA (1998), with its national survey in United States, found that female employees with kids were facing more barriers in their carrier development compared to male employees.

Organizational Commitment

Organizational commitment is generally defined as a collaboration of attitude and behavior (Ferris & Aranya, 1983). Organizational commitment is covering three attitudes: (a) feel of identification with organization's objectives: (b) feel of involvement with organization's tasks, and feel of loyalty to organization. Kalbers and Fogarty (1995) was using two views about organizational commitment, that is, affection and continuance. The result showed that organizational commitment of affection was related to one view of profesionalism, that is dedication to profession, whereas organizational commitment of continuance was positively related to experience and negatively related to professionalism view of social obligation. Thus, logically the employee who has high organizational commitment would have effect on professionalism in conducting their duty, and it would be reflected to their higher performance achievement. Harrel and Stahl (1984) concluded that organizational commitment is related to performance and can be used to predict success and high performance. It was, therefore, hypothesized that organizational commitment is closely related to lecturers' performance.

Professional commitment

Professional commitment is the degree of individual loyalty to the profession as perceived by each respondent. The study of Kalbers and Fogarty (1995) found significant relationship between experience and professional commitment that is its relationship to their colleagues. Norris and Neibuhr (1984) revealed that professionalism is positively related to commitment and job satisfaction, but the autonomy is not a dimension of professionalism. Harrel and Stahl (1984) concluded that professional commitment was related to performance and could predict success and high performance. Lecturers have high professional commitment logically have higher performance. It was hypothesized that there is a relationship between professional commitment and lecturers' performance.

Job Satisfaction

Job satisfaction is someone's attitude toward their work. It comes from perception about their job resulting from several aspects, that is, wages, promotion opportunity, supervisor, and colleague. Job satisfaction also comes from work environment factor such as supervision style, policy and procedure, membership of worker union, working condition and financial support. The primary reason of studying job satisfaction is to equip the management of higher education institution with ideas about ways to increase attitudes of lecturers. This attitude could be achieved by stimulating them, whether from the perception aspect or the environmental factor of educational institution. Lecturers who have no ability to actualize themselves professionally generally feel unsatisfied to do their job. It would be reflected by their poor performance (Sorenson, J. & Sorenson, T., 1974). The studies of Norris and Neibuhr (1984) and Kalbers and Fogarty (1995) showed positive relationship between professionalism to the view of peer relation with job satisfaction, which is reflected by the high performance attained. The study of Gaetner et al. (1987) about the turnover of local and regional employees of public accounting firm found that female employees were less satisfied compared to male employees. The dissatisfaction causes low performance and more level of turnover of female employees compared to males. Job dissatisfaction could be reflected by low performance which is affected by low professionalism, which is the effect of the low employees' ability to actualize them professionally. It was hypothesized that there is a relationship between job satisfaction and lecturers' performance.

Motivation

Motivation is viewed as strength that drive someone to do a certain action or behavior. Lecturers with high motivation are certainly have strong support to carry out their jobs, such as, research, and community service.

The study of Ross and Ferris (1981) revealed that motivation, job satisfaction, and commitment were positively related to performance. Harrell and Stahl (1984), in their study concluded that there was a relationship between motivation and performance and can be used to predict the success and high performance. Larkin (1990), on the other hand, revealed that gender has strong relation with performance evaluation about job satisfaction, motivation, and organizational commitment. It was hypothesized that there is a relationship between motivation and lecturers' performance.

Ability

The term ability used in this study refers to individual competence to meet their performance. Lecturer is classified as having competence if they complied with the qualifications, such as, level of education, school attended, grade point average (GPA), and working experience. Ferris and Larcker (1983) found that the three variables (college CPA, highest academic degree attained, and school attended) were significantly related to performance. Ross and Ferris (1981) concluded that the strong relation between institution's quality and the level of education could be used to predict performance. It was hypothesized that there is a relationship between ability and lecturers' performance.

RESEARCH METHODOLOGY

Variables and its Measurement

Performance evaluation. The lecturers' performance evaluation is proxied by the level of rank attained. It is measured by the number of articles that have made, the number of researches that have carried out, and the number of community services that have conducted during their work period.

Personality dimensions. Proxy variable for the dimension of personality are ability, organizational commitment, professional commitment, job satisfaction, and motivation.

Ability. It refers to individual competence to meet performance needed to accomplish their jobs. It is measured by the level of education, school attended, GPA, and working experience. Each respondent is equipped with three indicators of ability and they are expected to have at least a bachelor degree. Work experience was measured by the number of times they are teaching a subject.

Organizational commitment. It is referred to the individual strength which is identified with and related to the part of an organization. This reflects individual attitude to remain themselves to be part of organizations which is shown by their hard works. Organizational commitment was measured using instrument developed by Meyer and Allen (1984), which consists of organizational commitment of affection (seven items) and organizational commitment of continuance (five items).

Professional commitment. It is the level of individual loyalty to their profession as perceived by each respondents. Professional commitment in this study was measured by the instrument developed by Hall (1968), which consists of 5 opinions summarized to become 18 items.

Job satisfaction. It is defined as the level of individual satisfaction of their position in the organization relative to their peer. Job satisfaction in this study was measured by instrument developed by Larkin (1990) which consists of four items. Each respondent was asked about four questions related to job satisfaction. The aggregate value of 20 indicates the extreme satisfaction in their job. In aggregate, the score in these four questions suggest the extreme dissatisfaction of work.

Motivation. It is viewed as strength that drive someone to do a certain action or behavior. It was measured using the Theory of Expectation. The primary point of this theory is that individual motivation to do a certain level of effort would depend on the value of outcome received from the effort carried out. Thus, there is any probability that an effort will determine performance, and performance will drive outcome. It was measured using the instrument developed by Hunton et al. (1996) with 10 item and 5 Likert scale (loading factor 0.90).

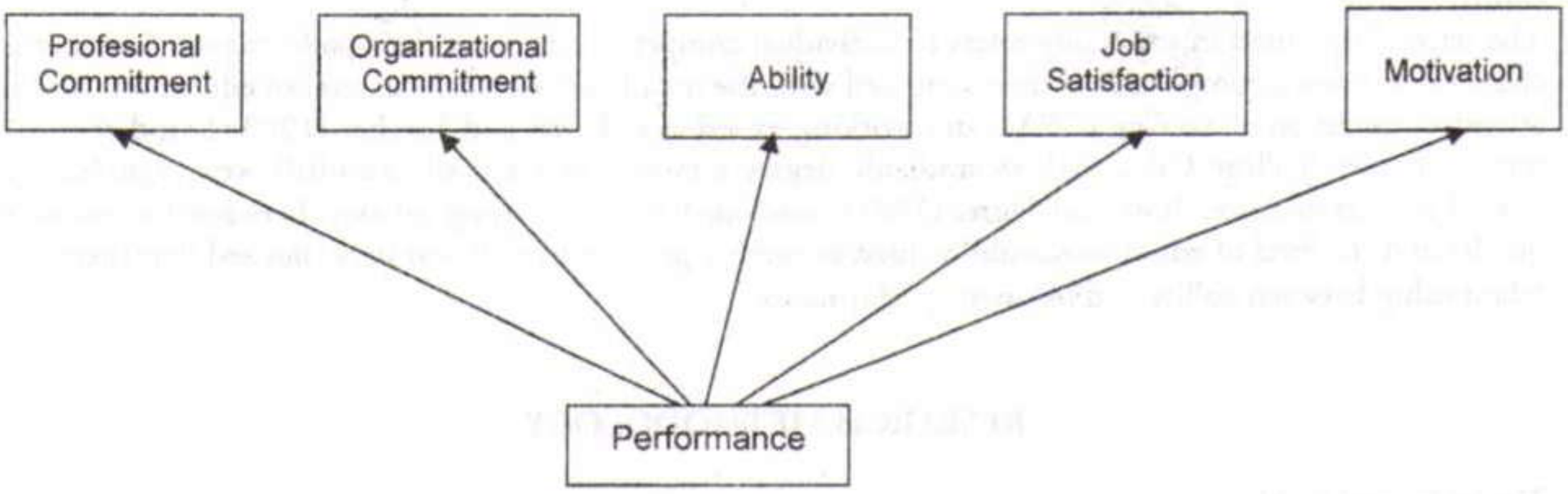


Figure 1. Research Model

METHODOLOGY

Sampling Procedure

Sample lecturers in Surabaya were drawn using the purposive method of sampling. The sample size was limited to lecturers who have at least two years of experience. The consideration is that the two years of experience indicate their willingness to be a lecturer.

Method of Data Collection

This study used survey method. The questionnaire was distributed to higher education institutions located in Surabaya, namely; UPN, STESIA, STIE-Perbanas, UNM, UH, UNITOMO, UNTAG, and UNAIR. The data were collected through mailed-questionnaire to lecturers who are working in institutions located in Surabaya.

Data Analysis

Data were analyzed using the correlation bivariate to determine the relationship of the five dimensions of personality to the performance of lecturers. The reliability the questionnaires was tested.

RESULTS

From 150 questionnaires distributed, only 65 were returned, and only 49 were valid. Hence, the response is 40 percent. The reliability test shows that Cronbach alpha value is 0.6676. This value is based on Nunnally's criteria (1967) in Imam Ghozali (2005). It could be concluded that the questionairre used in the study is reliable.

The descriptive analysis shows that the average age of the respondents is 39 years old with two children. They have a mean of 10 years of work experience, with master's degree and a GPA of 3.25. The average rank attained is Lektor.

The correlation analysis shows that the variable ability has significant relationship working period and educational level. This is supported by the descriptive statistic analysis which shows that the average working period by the respondents is 10 years, GPA is 3.25, and average level of education is master's degree. This finding is in agreement with the previous studies of Harrell and Stahl (1984), Jiambalvo (1979), Ross and Ferris (1981), and Ferris and Larcker (1983). The strong relation of ability to lecturers' performance could also be explained by the policy that drives the lecturers to have the educational level of at least master's degree. This policy effectively made each institution to comply with this qualification.

The job satisfaction variables were found to be not significantly related to job performance. There were also weak correlation between job satisfaction of educator and performance. The low job satisfaction is probably concerned with the low support for lecturers to actualize themselves as required by the profession. The lecturers' perception about their low performance maybe related to their low welfare. Certainly, this has less contribution to lecturers' actualization to meet the requirement as demanded by *Tri Darma Perguruan Tinggi*. This finding coincides with the studies revealed that someone who has no ability to actualize themselves professionally is having the tendency to be dissatisfied in their work (Sorensen and Sorensen, 1974).

The variable professional commitment has no correlation with performance. It means that the lecturers' professional commitment to their profession is weak. They should theoretically have high degree of professionalism which coincides with the study of Kalbers and Fogarty (1995). Yet, in this study, the weak correlation of professional commitment can be attributed to their low job satisfaction and welfare, which has an effect on professional commitment. The finding is supported by Norris and Neibuhr's (1984) study which revealed that professionalism is positively related to job satisfaction.

The correlation value of organizational commitment is -0.75 which was found to be insignificant. It reveals that the relationship between organizational commitment and lecturers' performance is inversely related but not significant. This finding coincides with Kalbers and Fogarty's (1995) findings which revealed that organizational commitment was positively related to experience and negatively related to professionalism view of social obligation.

The motivation variable has the correlation coefficient of -0.123 ($p > .01$). It reveals that the relation between motivation and lecturers' performance is weak and inversely related. This finding is in contrast to the study of Ross and Ferris (1981), which revealed that motivation is positively related to performance.

Observing the expectation theory, it could be used as an explanation of the low relationship of motivation, professional commitment, organizational commitment, and job satisfaction to performance. Based on the theory, someone would be driven to do an action if there is any expectation about what would receive in return from that action. The low welfare of lecturer would impact to low motivation, low professional commitment, low organizational commitment, and low job satisfaction. The descriptive statistics indicate that, on average, 67 percent of respondents are male and serve as the only income earners for their family. This rule has driven them to seek other jobs to meet their family's needs. This can severely affect their performance because they allocate more effort on their side-job. This can be reflected in their low rank (at least Lektor) even though they have an average of 10 years working period as a lecturer. It also revealed that 67 percent of respondents are male with two children comprising 32 percent. The age of the respondents is between 27 to 42 years. Most of them, are young couple, the age of where they need more income to cover their cost of living, such as housing and other facilities. They need more attention to seek

other sources of income beyond their primary source of income as lecturer. This finding coincides with the previous study of AICPA (1998), which revealed that marriage status and the number of children have influence on performance. Subsequent study needs to consider other variables, such as the level of lecturers' welfare and the lecturers' primary source of income.

CONCLUSION, LIMITATION, AND IMPLICATION

The dimensions of personality, that is, organizational commitment, professional commitment, job satisfaction, and motivation have insignificant relationship to lecturers' performance. Based on the Theory of Expectation, the weak relation of variables (i.e. organizational commitment, professional commitment, job satisfaction, and motivation) to performance is caused by the low welfare of lecturers. It has low organizational commitment, professional commitment, job satisfaction, and motivation of lecturers because of low returns received from their action. Only ability variable has positive significant relation to performance, because of the institutions' policy to meet the qualification requirements.

The study was limited to only five variables of personality dimensions. There are still many variables and/or other personality dimensions that could affect performance. Which were not considered in this study.

REFERENCES

American Institute of Certified Public Accountants. (1988). Upward mobility of women. *Special Committee Report to the AICPA Board of Directors.*

Aranya, N. & Ferris, K. (1983). Organizational-professional conflicts among U.S. and Israeli professional accountants. *Journal of Consulting and Clinical Psychology, 42*(2), 155-162.

Ferris, K. R. & Larcker, D. F. (1983). Explanatory variable of dosen performance in a large public accounting firm. *Accounting, Organizations and Society*, 1-11.

Gaertner, J., Hemmeter, P. & Pitman, M. (1987). Employee turnover in public accounting: A new perspective. *The CPA Journal*, 30-37.

Harrell, A. & Stahl, M. (1984). McClelland's trichotomy of needs theory and the job satisfaction and work performance of CPA firm professionals. *Accounting and Society 9*, 241- 252.

Jiambalvo, J. (1979). Performance evaluation and directed job effort: Model and analysis in a CPA firm setting. *Journal of Accounting Research*, 436-455.

Kalbers, P., Lawrrence &, Fogarty, T. J. (1995). Professionalism and its consequences: A study of internal Auditors. *Auditing: A Journal of Practice, 14*(1), 64-86.

Larkin, J. M. (1990). Does gender affects' performance ?. *The Women CPA*, pp.20-24.

Norris, D. & Niebuhr, R. (1984). Professionalism, organizational commitment and job satisfaction in accounting organization. *Accounting Organizations and Society*, 49 -58.

Ross, J. & Ferris, K. R. (1981). Interpersonal attraction and organizational outcome: A field examination. *Administrative Science Quarterly*, 616-633.

Sorensen, J. & Sorensen, T. (1974). The conflict of professionals in bureaucratic organizations. *Administrative Science Quarterly*, 98-106.

STUDENTS' AWARENESS OF THE COLLEGE GUIDANCE PROGRAM AND ITS COMPONENT SERVICES

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ABSTRACT

The concern of the study as on the lack of appropriate means to ascertain the category of students' perception of guidance program and its component services of St. Therese-MTC Colleges during the School Year 2005-2006. There is no way of knowing how students viewed the program in its entirety and on the bases of selected variables such as gender, course, and socio-economic status. Descriptive research design was used to describe the state of affairs of the guidance program and its services, as fully and carefully as possible. This method was deemed appropriate, because the guidance program can be described in detail on the bases of its specific services perceived by students. Findings revealed that college students, considered the nature and organization of the guidance program adequate. When they were grouped in terms of gender, course, and socioeconomic status, the guidance program was, likewise, perceived as adequate. Given the different services, the follow-up service has the lowest mean, while placement service has the highest. These findings imply that more attention should be given to its placement service, while performing in a highly effective manner other guidance services such as individual inventory, information, testing, counseling, and follow-up, to achieve a very adequate level of student servicing in the near future.

Keywords: College guidance program, student awareness

THEORETICAL FRAMEWORK

The theoretical framework for this study is anchored on the Heimstra (1972) theory stating that the individual's response to the stimulus confronting him is primarily attributed to his perception. In turn, this perception is dependent on his past experiences or memories, where their roles in providing meaning to sensation are deemed crucial. Heibert (1993), a known theorist, has differentiated sensation from perception, saying that perception involves meaning while sensation is mere sense impression. He further explained that the physical senses are entry points for the mind to become aware and conscious of what is happening in the surrounding environment. However, ideas formation, variation, and interpretation happen because of differences in the individual's capacity to interpret the environmental stimuli confronting him at any given time and situation.

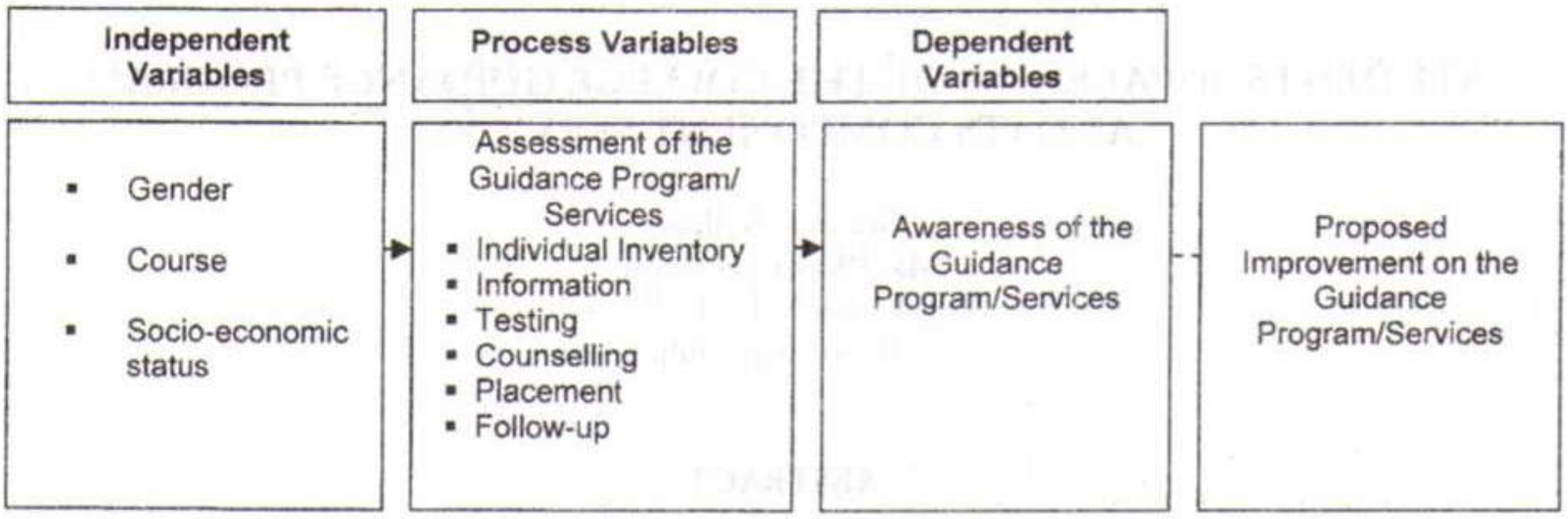


Figure 1. Research paradigm

Statement of the Problem

The main purpose of the study is to determine the awareness of students of the St. Therese-MTC Colleges as basis in the improvement of the guidance program and services rendered for academic excellence.

Specifically this study sought answers to the following questions:

1. Are the students aware of the services provided under the guidance program of the College?
2. What is the level of awareness of the respondents towards the guidance program and its components services when taken as a whole, and when classified according to gender, course, and socio-economic status?
3. Are there significant differences in the awareness of the respondent towards the guidance program and its component services when taken as a whole and classified according to gender, course, and socio-economic status?
4. What proposed improvements in the guidance program and its component services should be done for academic excellence?

Objectives of the Study

The study aimed to:

1. identify the students' awareness of the specific services provided under the guidance program of the College;
2. determine the level of college students' awareness towards the guidance program of the College when taken as a whole, and when classified according to gender, course, and socioeconomic status;
3. compare the level of students' awareness towards the Guidance Program and its component services when grouped according to gender, course, and socioeconomic status; and
4. recommend ways to be used in improving the guidance program and in its component services for academic excellence.

Hypothesis

There are no significant differences in the level of awareness towards guidance program and its component services when taken as a whole and when grouped according to gender, course, and socio-economic status.

METHODOLOGY

The descriptive method of research was used in conducting this study. This method presents facts concerning the nature and status of the phenomenon studied, making known the characteristics of a group of persons, a number of objects, a set of conditions, a class of events, a system of thought, or any kind of phenomenon one may wish to study (Fraenkel & Wallen, 2006: 14).

Stratified random sampling method was used in drawing samples. The subjects include a sample of 214 college students of St. Therese–MTC Colleges enrolled during the School Year 2005-2006. These students were initially viewed as a whole group, and then classified according to gender, course, and socioeconomic status.

The instrument used in gathering data was a questionnaire consisting of two parts. Part 1 consisted of preliminary data regarding the respondents' personal data. Part 2 contained 33-item statements that describe the college students' awareness concerning the guidance program of St. Therese-MTC Colleges. The questionnaire was validated by qualified persons. Since most of the items were accepted, the questionnaire was considered valid for the purpose.

The questionnaire was administered to 214 randomly selected students coming from different degree programs after the approval of school authority. Before the questionnaire was administered, the purpose was explained. Since the administration was done during the school year, the retrieval was 100 percent. The accomplished instrument was checked to ensure that all items were answered accordingly. The data were tallied, tabulated, computed, analyzed, and interpreted. The data gathered were subjected to certain computer-processed statistics, specifically using the Statistical Package for Social Sciences (SPSS) software.

The descriptive statistics used in data analysis included mean, frequency, and percentage. Frequency count was used to determine the number of scores obtained in each variable. Percentage indicated the rate of score per hundred. Means referred to the computed mean scores used to describe the students' awareness towards guidance program. Inferential statistics used were the *t* test for independent samples to determine the differences in the level of awareness of the students towards the guidance program or services when classified according to gender and the one-way analysis of variance (ANOVA) was used to determine the level of awareness of the students towards the guidance program when classified according to course and socioeconomic status. The significance level was set at .05.

FINDINGS

1. When the college students' responses were grouped as a whole, the obtained mean was 3.86 which is considered "adequate" in terms of their level of awareness towards the guidance program.
2. When the college students' responses were grouped on the bases of gender, the obtained mean was 3.86, also considered as adequate.
3. When college students' responses were classified into course, their general awareness about the guidance program was adequate, with BSHRTM having the highest mean point of 4.70.
4. When college students' responses were grouped as to their socioeconomic status, the guidance program was perceived adequate. Those falling under the high socioeconomic status had the highest mean point of 4.05.
5. Findings further indicated that given the different services under the guidance program of the college, the follow-up services has the lowest mean of 3.31 "fairly adequate", while placement services has the highest mean of 4.00 (adequate). These findings imply that the guidance program has been adequate in helping graduates seek jobs and other employment opportunities. Hence, it must give more attention or introduce tangible improvements to its follow-up services for tracking its alumni and graduates, while conducting the other guidance services to achieve a "very adequate" level (with mean of 4.20 and

above). Further, it behooves on the guidance program of the college to achieve the quality of excellence in student servicing to produce globally competitive graduates.

Table 1
College Students' Awareness of the Nature and Organization of the Guidance Program When Taken as an Entire Group and When Classified as to Their Gender, Course, and Socio-Economic

Category	Mean	Description
Entire group	3.86	Adequate
Gender		
Male	3.86	Adequate
Female	3.86	Adequate
Course		
BSHRTM	4.00	Adequate
BSHRM	3.89	Adequate
AHRM	3.70	Adequate
Socioeconomic status		
High	4.05	Adequate
Average	3.92	Adequate
Low	3.66	Adequate

Table 2
College Students' Overall Perception of Guidance Services

Guidance service	Mean	Qualitative description
Entire group	3.86	Adequate
Individual inventory	3.87	Adequate
Information services	3.85	Adequate
Testing services	3.88	Adequate
Counseling services	3.89	Adequate
Placement services	4.00	Adequate
Follow-up services	3.31	Adequate

Table 3
Differences in the Level of Awareness of the Students towards the Guidance Program/Services when Classified according to Gender

	Gender	N	Mean	*t*	*df*	Sig. (2-tailed)
Overall Services		214	3.86	.475	212	.635^{ns}
Individual inventory	Male	80	3.86	-.191	212	.848^{ns}
	Female	134	3.87			
Information Services	Male	80	3.87	.342	212	.733^{ns}
	Female	134	3.84			
Testing services	Male	80	3.90	.451	212	.652^{ns}
	Female	134	3.87			
Counseling services	Male	80	3.94	1.271	212	.205^{ns}
	Female	134	3.86			
Placement services	Male	80	4.04	1.078	212	.282^{ns}
	Female	134	3.97			
Follow-up services	Male	80	3.23	-1.808	212	.072^{ns}
	Female	134	3.36			

ns = not significant

Table 4
Differences in the Level of Awareness of the Students towards the Guidance Program/Services when Classified according to Course

One-Way ANOVA Result	*F*	*p* value
Individual Inventory	4.655	.011*
Information Services	29.736	.000*
Testing Services	3.208	.042*
Counseling Services	8.113	.000*
Placement Services	7.362	.001*
Follow-up Services	23.411	.000*
Over-all Services	11.173	.000*

*significant at 5%

Table 5
Post Hoc Analysis of the Differences in the Level of Awareness of the Students towards the Guidance Program when Classified according to Course

	(I) Course	(J) Course	Mean difference (I-J)	Std. error	*p* value
Inventory Services	BSHRTM	BSHRM	-.06419	.04321	.300
		AHRM	-.14081*	.04631	.007*
	BSHRM	BSHRTM	.06419	.04321	.300*
		AHRM	-.07662	.04220	.167
	AHRM	BSHRTM	.14081*	.04631	.007*
		BSHRM	.07662	.04220	.167
Information Services	BSHRTM	BSHRM	.37564*	.07759	.000*
		AHRM	.63886*	.08316	.000*
	BSHRM	BSHRTM	-.37564*	.07759	.000*
		AHRM	.26322*	.07579	.002*
	AHRM	BSHRTM	-.63886*	.08316	.000*
		BSHRM	-.26322*	.07579	.002*
Testing Services	BSHRTM	BSHRM	-.16000	.08341	.136
		AHRM	.02721	.08940	.950
	BSHRM	BSHRTM	.16000	.08341	.136
		AHRM	.18720	.08147	.058
	AHRM	BSHRTM	-.02721	.08940	.950
		BSHRM	-.18720	.08147	.058
Counseling Services	BSHRTM	BSHRM	.28674*	.07419	.000*
		AHRM	.24615*	.07951	.006*
	BSHRM	BSHRTM	-.28674*	.07419	.000*
		AHRM	-.04059	.07246	.841
	AHRM	BSHRTM	-.24615*	.07951	.006*
		BSHRM	.04059	.07246	.841
Placement Services	BSHRTM	BSHRM	-.25277*	.08032	.005*
		AHRM	-.30795*	.08609	.001*
	BSHRM	BSHRTM	.25277*	.08032	.005*
		AHRM	-.05518	.07846	.762

	AHRM	BSHRTM	.30795*	.08609	.001*
		BSHRM	.05518	.07846	.762
Follow-up Services	BSHRTM	BSHRM	.44217*	.07631	.000*
		AHRM	.51128*	.08179	.000*
	BSHRM	BSHRTM	-.44217*	.07631	.000*
		AHRM	.06911	.07454	.624
	AHRM	BSHRTM	-.51128*	.08179	.000*
		BSHRM	-.06911	.07454	.624
	(I) Course	(J) Course	Mean difference (I-J)	Std. error	*p* value
Over-all Services	BSHRTM	BSHRM	.10427*	.03233	.004*
		AHRM	.16172*	.03465	.000*
	BSHRM	BSHRTM	-.10427*	.03233	.004*
		AHRM	.05745	.03158	.166
	AHRM	BSHRTM	-.16172*	.03465	.000*
		BSHRM	-.05745	.03158	.166

*. The mean difference is significant at the 0.05 level.

Table 6
Differences in the Level of Awareness of the Students towards the Guidance Program/Services when Classified according to Socioeconomic Status

One-Way ANOVA Result	*F*	*p* value
Individual Inventory	.231	.794^{ns}
Information Services	2.666	.072^{ns}
Testing Services	.035	.965^{ns}
Counselling Services	.956	.386^{ns}
Placement Services	1.392	.251^{ns}
Follow-up Services	2.752	.066^{ns}
Over-all Services	.254	.776^{ns}

ns = not significant

CONCLUSION

1. Gender has no bearing on the level of awareness towards the guidance program/services rendered by the College.
2. In the individual inventory, the BSHRTM and AHRM significantly differ while the BSHRM and BSHRTM, and the BSHRM and AHRM were not significantly different in their level of awareness towards the guidance program.
3. In the information services, the BSHRTM and BSHRM, BSHRTM and AHRM, and BSHRM and AHRM are significantly different.
4. In the testing services, the no groups are significantly different.
5. In the counseling services, the BSHRTM and BSHRM, and BSHRTM and AHRM differ significantly in their level of awareness towards the guidance program while the BSHRM and AHRM do not significantly differ.
6. In the placement services, the BSHRTM and BSHRM, and BSHRTM and AHRM significantly differ while the BSHRM and AHRM do not.

7. Lastly, in the follow-up services, the BSHRTM and BSHRM, and BSHRTM and AHRM significantly differ while the BSHRM and AHRM do not significantly differ in their level of awareness towards the guidance program/services. Overall, the levels of awareness of students towards the guidance program/services differ significantly between groups of BSHRTM and BSHRM and AHRM.
8. Socioeconomic status of the students does not significantly differ in the level of awareness towards the guidance program/services offered by the College.

RECOMMENDATIONS

1. In areas where college students showed strength, as in the positive attitude in the nature and organization of the guidance program, the administrators should provide continuous motivation by recognizing the efforts of the guidance counselors and peer facilitators, and by giving substantial incentives to those who truly deserve. To achieve this, the present administration must create a committee tasked to develop a set of criteria in determining who are qualified and how much incentive can be given.
2. To remedy some weaknesses revealed in this study, especially the lack of community and financial support, the administrator in close coordination with the guidance counselors, should foster better public relations with key leaders in the community, such as officials of the local government and socio-civic organization. To tap students' involvement, the college student council should spearhead legitimate income-generating projects, like raffle promotions and film showing in support of student entrepreneurship, or organizing "dinner for-a-cause" by inviting the deserving alumni and potential benefactors.
3. In areas where college students showed potential strengths in the organization of the guidance program, the guidance counselors should further enhance coaching or nurturing students to enjoy the services offered in the program. They should schedule a periodic student evaluation of the guidance program to monitor its level of effectiveness and efficiency and, eventually, develop appropriate measures for program improvement.
4. Inasmuch as limited aspects of certain services were identified and studied, further research should be conducted to obtain a holistic perspective of the guidance program in the College, taking into account the other guidance programs throughout the country for comparative analysis and growth.
5. Since the implementation of the program started long way back, a longitudinal study concerning the guidance program evaluation should be undertaken, focusing on program milestones on effectiveness and adaptability to present needs of the educational system and changes. Such study must be guided by the contemporary educational goals and priorities, as mandated in pertinent legislation in education, as well as guidance and counseling.
6. The results of this study should be disseminated to a wider audience. Their critical responses should be carefully considered as one of the bases in improving the very essence and structure of the guidance program of the College, to ensure a successful development and implementation for the benefit and enjoyment of all stakeholder

REFERENCES

Fraenkel, J. R. & Wallen, N. E. (2006). *How to design and evaluate research in education* (6th ed.). New York: McGraw-Hill Companies, Inc.

Franco, E. A. et al. (1994). *Educational planning*. Quezon City: Kalayaan Press Mktg. Ent. Inc.

Heimstra, A. P. (1972). *Organizational behavior*. New York: American Book Company.

Hiebert, B. (1993). A time for infusion. *Guidance and Counseling*. New York: McGraw Hill.

Hisole L. & Adelantar, M. (1983). *Guidance: A comprehensive approach* (1st ed.). Iloilo City: Rojo Printing and Services.

Kapunan, R. R. (1974). *Fundamentals of guidance and counseling*. Quezon City: Rex Printing.

Levi, M. & Ziegler. (1993). *Guidance and counseling*. New York: McGraw Hill Book Co.

Lupdag, A. D. (1984). *Educational psychology*. Philippine National Bookstore.

McShane, E. L. & Von Glinow, M.A. (2000). Organizational behavior: *Emerging realities for the workplace revolution* (International Edition). Boston: Irwin and McGraw-Hill Higher Education.

Miller, T. K., Winston, R. B. Jr., & Associates (1991). *Administration and leadership in student affairs*. Muncie, Indiana: Accelerated Development Inc.

Milne, A. (2003). *Teach yourself: Counseling*. London: Hodder Headline Ltd.

Myers, P. G. (1992). *Psychology*. New York: Worth Publishers.

Ordonez, M. (1985). *Guidance in Philippine setting*. Manila: National Bookstore.

Padilla, E. C. (1991). *Teachers' perception of the nature and organization of the secondary school guidance program in the Division of Iloilo*. Unpublished master's thesis, West Visayas State University, La Paz, Iloilo City.

Patterson, L. E. & Welfel, E. R. (2000) *The counseling process* (5th ed.). Australia: Brooke Cole, Thomson Learning.

Robbins, S. P. (2001). *Organizational behavior*. Singapore: Pearson Education, Asia Pte Ltd.

Singh, Y. K. (2005). *Guidance and career counseling*. New Delhi: A. P. H. Publishing Corp.

Vito, E. A. (1993). The *guidance program of Filamer Christian College as perceived by administrators, counselors, teachers, and students*. Unpublished master's thesis, Colegio de la Purisima Conception, Roxas City.

FACTORS AFFECTING THE CONDITION OF LEARNING ORGANIZATION: CHANDRAKASEM RAJABHAT UNIVERSITY, THAILAND

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ABSTRACT

The purposes of this research were: (a) to determine the factors contributing towards becoming a learning organization of Chandrakasem Rajabhat University; (b) to compare staff's opinions about becoming a learning organization classified by educational background, positions, and working periods; and (c) to examine the relationship between factors contributing towards becoming a learning organization and the status of learning organization. Data were collected using questionnaires. The respondents were 145 academic and support staff selected through simple random sampling method.

The findings revealed that: (a) The opinion of factors affecting the learning organization at highest level was leadership. The lowest level was persuasion; (b) The opinion of being the learning organization at highest level was shared visions and lowest level was shared learning; (c) The opinions of how to be learning organization when classified by educational background, position, and period of working time, mind map, shared vision, shared learning and systematic thinking were different; and (4) There is a significant relationship between factors affecting the learning organization and becoming a learning organization.

Keywords: Learning organization

INTRODUCTION

Chandrakasem Rajabhat University of Thailand has a policy to transform the university to be a learning organization. The Center for Learning Organizational Development was established in order to promote the five disciplines suggested by Senge (1990) namely: (a) Personal Mastery; (b) Mental Model; (c) Shared Vision; (d) Team Learning; and (e) Systems Thinking. Personnel are motivated to seek new knowledge to increase their potential and accomplishment.

Marquardt (1994) suggested steps to promote the aforementioned disciplines: (a) Organization transformation, (b) Knowledge management, (c) technology application, (d) people empowerment, and (e) learning dynamics. Furthermore, Gavin (1993) proposed another steps towards becoming a learning organization: (a) systematic problem solving, (b) experimentation with new approaches, (c) learning from their own experience and past history, (d) learning from the experiences and best practices of others, and (e) transferring knowledge quickly and efficiently.

OBJECTIVES

The objectives of this study were:

1. To determine the factors contributing towards becoming a learning organization of Chandrakasem Rajabhat University;

2. To compare staff's opinions about becoming a learning organization classified by educational background, positions and periods of working; and

3. To examine the relationship between factors contributing towards becoming a learning organization.

CONCEPTUAL FRAMEWORK

Sasakorn (2007) found the following factors leading towards becoming a learning organization of basic education institutes: (a) organization structure, (b) system thinking, (c) Organization strategy, (d) organizational culture, (e) personnel development, (f) teamwork, (g) share vision, (h) organization environment, and (i) knowledge transfer. These factors were influenced by general characteristics of the staff. For the purpose of this research, general characteristics included educational background, positions, and periods of working with the university. The learning organization status was operationalized based on the fifth discipline suggested by Senge (1990).

RESEARCH METHODOLOGY

The methodology of this research was quantitative. Data collection was conducted by using questionnaires. The population consisted of 270 academic and support staff of Chandrakasem Rajabhat University, 60 percent of each group in the population was included in the sample using simple random sampling. The samples selected were 95 academic and 67 support staffs. However, only 83.15 percent of the academic staff responded to the questionnaire and 98.5 percent of the support staff. Altogether, data were collected from 145 respondents. The questionnaire included 82 factors for respondents to rate. The status of the learning organization was operationalized by 32 item-questionnaire 5-point Likert scale was used ranging from 1=strongly agree to 5 = strongly disagree. Data analysis was done by using percentage, mean, standard deviation, *t* test, *F* test, and correlation.

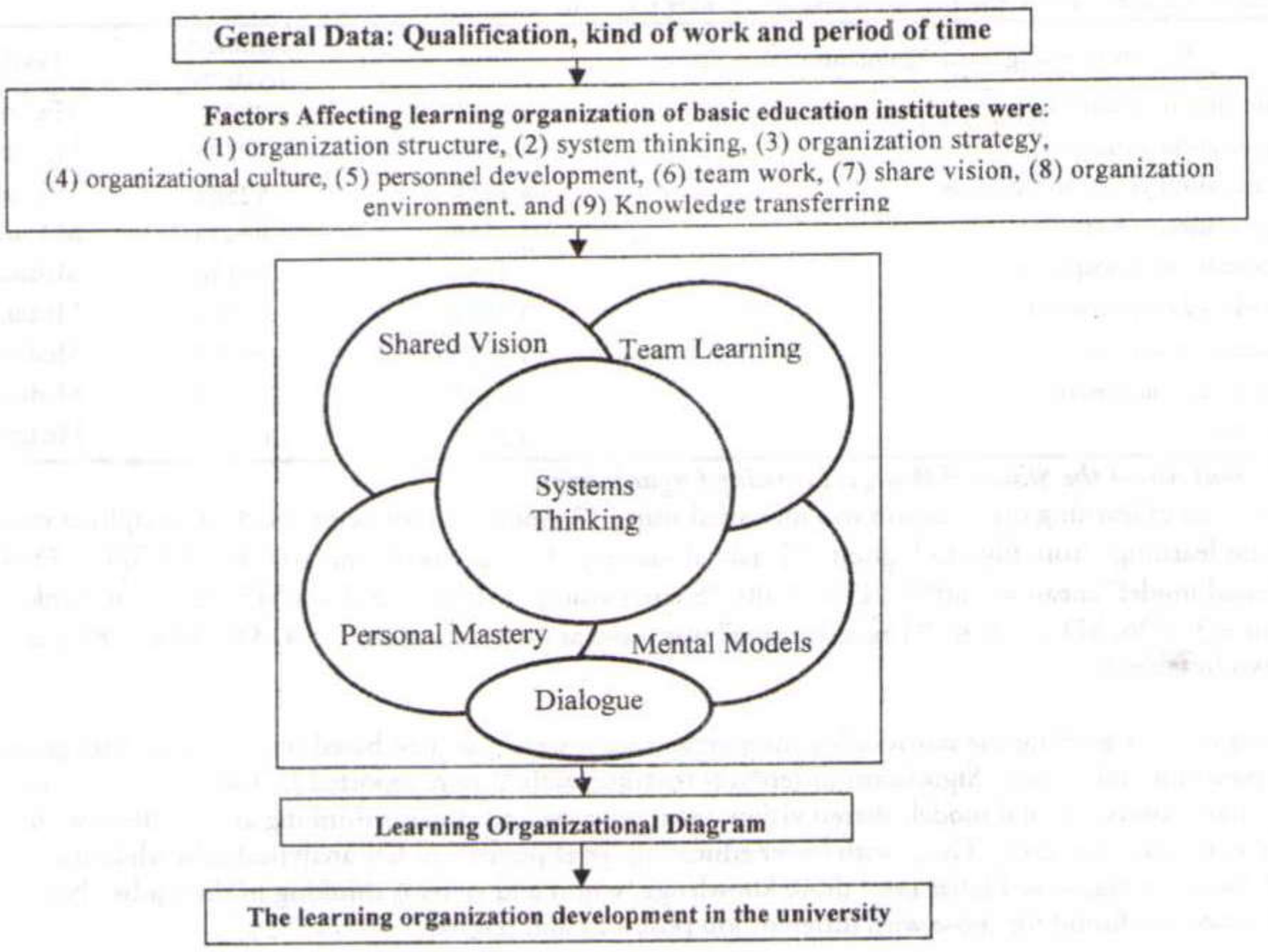


Figure 1. Conceptual framework

HYPOTHESES

1. There are significant differences in the opinions among personnel who have different educational background, positions, and periods of working.
2. There are positive relationships between factors affecting learning organization and becoming a learning organization.

FINDING AND DISCUSSION

Opinions About Factors Contributing to the Status of Learning Organization

The samples included female aged between 31 to 40 years old and have been working with the university between 1 to 5 years.

The respondents reported the top three most important factors contributing towards becoming a learning organization. "Leadership for changing" was rated as the most important factor (mean = 3.5776, SD = 0.8300) followed by "organization structure" (mean = 3.4713, SD = .8778) and "organization vision and strategy" (mean = 3.5372, SD = .8259). The top nine factors are presented in Table 1.

Table 1
Opinions Towards Factors Affecting the Status of Learning Organization

Factors effecting learning organization	Mean	Standard deviation	Level
Leadership for changing	3.5776	.83001	Highest
Organization structure	3.4713	.87775	Medium
Organization vision and strategy	3.5372	.82589	Highest
Organization culture	3.4858	.89953	Medium
Organization atmosphere	3.4337	.94120	Medium
Knowledge management	3.3142	.89794	Medium
Information system	3.3877	.90373	Medium
Administration system	3.4437	.85552	Medium
Persuade	3.2927	1.02547	Medium

Opinions About the Status of Being a Learning Organization

The status of learning organization was measured using 32 items. Respondents rated all disciplines except "Team learning" from high to highest. "Personal mastery" has obtained a mean of 3.5402, SD = .7334, "Mental model" mean = 3.6092, SD = .7300, "Shared vision" = 3.6172, SD = .6515, "Systems thinking" mean = 3.5526, SD = .7218. "Team learning" was rated as medium (mean = 3.4138, SD = .8092) as shown in table 2.

The opinions regarding the status of learning organization were classified based on education background, job positions and tenure. Significant differences (marked with *) were reported in Table 3 in terms of personal mastery, mental model, shared vision, team learning and systems thinking among those with different education levels. Those with lower education, level performed less analytical jobs while those with bachelor degree or higher need more knowledge, vision and systems thinking in their jobs. No difference was found for those with different job positions and tenure.

Table 2
Opinions Regarding the Status of Being a Learning Organization

Being the learning organization	Mean	Standard deviation	Level
Personal mastery	3.5402	.73343	High
Mental model	3.6092	.73003	Highest
Shared vision	3.6172	.65148	Highest
Team learning	3.4138	.80916	Medium
Systems thinking	3.5526	.72179	High

Table 3
Opinions Regarding the Status of Being a Learning Organization Classified by Education Background, Job Positions, and Tenure

Being the learning organization	Education background (*F* test)	Position (*t* test)	Tenure (*F* test)
Personal mastery	.026*	.912	.230
Mental model	.046*	.421	.412
Shared vision	.017*	.131	.487
Team learning	.032*	.340	.720
Systems thinking	.010*	.065	.545

*$p \leq .05$

The Relation Between Factors Contributing to Becoming a Learning Organization and Opinions Regarding the Learning Organization Status of the University

Pearson correlations were calculated between factors proposed to contribute to becoming a learning organization and the perceived status of the learning organization of the university. Table 4 shows that all of the hypothesized factors to contribute to becoming a learning organization were associated with the opinions regarding the learning organization status of the university.

Table 4
Correlations Between Factors Contributing to Becoming a Learning Organization and Opinions Regarding the Learning Organization Status of the University

Items		Self learning	Mine map	Share vision	Share learning	System thinking
Leadership for changing	Pearson Correlation	.606(**)	.570(**)	.663(**)	.691(**)	.730(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	145	145	145	145	145
Organization structure	Pearson Correlation	.521(**)	.480(**)	.640(**)	.663(**)	.616(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	145	145	145	145	145
Organization Vision	Pearson Correlation	.560(**)	.584(**)	.662(**)	.690(**)	.707(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	145	145	145	145	145
Organization culture	Pearson Correlation	.505(**)	.486(**)	.613(**)	.582(**)	.570(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	145	145	145	145	145
Organization atmosphere	Pearson Correlation	.564(**)	.463(**)	.603(**)	.625(**)	.555(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	145	145	145	145	145
Knowledge management	Pearson Correlation	.526(**)	.450(**)	.532(**)	.538(**)	.541(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	145	145	145	145	145
Information system	Pearson Correlation	.535(**)	.441(**)	.500(**)	.448(**)	.483(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	145	145	145	145	145
Administration system	Pearson Correlation	.459(**)	.424(**)	.526(**)	.558(**)	.514(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	145	145	145	145	145
Persuade	Pearson Correlation	.480(**)	.426(**)	.515(**)	.544(**)	.466(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.000
	N	145	145	145	145	145

*$p \leq .05$

CONCLUSION

Respondents prefer leaders who have vision and promote human resources development who creates staffs' understanding in performing tasks. Leaders should be a role model and provide opportunities for staff to work autonomously. Most respondents have been working with the university for 1 to 5 years. Their salary is lower than the salary in the private sector. They feel the need to be trained by the leaders. They are evaluated every six months and worked under annual contract, hence, they feel insecure in their jobs.

The personnel feel that they could express opinions, work together and share ideas. Hence, they feet they are part of the team. However, the staff do not share their teachings with each other. The supporting staff are assigned with specific jobs that could not share with each other. The personnel feel that the development of their units are necessary because several units do not provide good services to students and other staff, slow services, inappropriate manners in servicing, and lack of systems in work. Moreover, there are problems with turnover in which recruitments are performed after the personnel quit. The new recruits have to learn the job themselves and the tasks lack continuity.

RECOMMENDATIONS

1. The university should organize orientation programs to enable personnel to understand the civil service systems and procedures for tasks, for example, budget requisitions, governmental procedures, memorandum writing, and the like.
2. Internal communication should be performed through documents and print media to enhance learning of both academic and support staff.
3. Human resource development should be performed especially for educational visits and scholarship for further study.
4. Compensations and benefits should be planned to help staff with their living allowances and career paths.
5. There is a need to promote innovation in performing tasks in association to learning, teaching, research, and administrative jobs.

REFERENCES

Garvin, D. A. (1993). Building a learning organization. *Harvard Business Review*, 71(4), 478-91.

Marquardt, M. J. & Reynolds, A. (1994). The Global Learning Organization. Burr Ridge: Irwin Professional Publishing.

Marquardt, M. J. (1994). The impact of the cultural environment on HRD. In *Training and Development Yearbook*. Englewood Cliffs: Prentice Hall.

Sasakorn, C. (2007). Factors effecting learning organization of basic education institute. Doctoral dissertation, Silpakorn University.

Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization*. London:Century Press.

FACTORS AFFECTING BURNOUT OF FACULTY MEMBERS IN SELECTED TERTIARY SCHOOLS IN CAVITE: A BASIS FOR A STRESS MANAGEMENT PROGRAM

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ABSTRACT

The factors affecting burnout of faculty members in selected tertiary schools in Cavite for the first semester of School Year 2008-2009, which will serve as basis for a proposed stress management program, were identified. The level of burnout was also compared when the respondents are grouped in terms of same characteristics. Multiple regression analysis was used to test if the respondents' burnout level is affected by the selected demographic and work-related variables, while the variance was employed to compare their burnout level.

It was found that faculty-respondents have slightly moderate degree of burnout. Significant differences were found in the level of burnout of the respondents when they were grouped in terms of age, civil status, monthly salary, employment status, length of work experience, number of workload in a week, student discipline problems, and availability of facilities. Civil status, monthly salary, number of workload in a week, harmonious relationship with cofaculty members, and balanced workload proved to be significantly affecting the burnout level of the respondents.

Keywords: Burnout, burnout level, stress management program, tertiary schools, workload, work relationship, student discipline problems

INTRODUCTION

Burnout has been identified as a significant issue among those in instructional positions (Hogan & McKnight, 2007). It is a condition that occurs over time and is characterized by emotional exhaustion and a combination of negative attitudes (Kreitner & Kinicki, 1998). When work stress results in burnout, it can have serious consequences for the health and happiness of teachers, and also the students, professionals, and families they interact with on a daily basis ("Understanding and Preventing", n.d.). The essence of burnout among teachers is a feeling of professional failure due to the gap between the actual feelings of personal professional competence and the ideal competence to which the teacher aspires. In addition, they may show negative and low expectations of students, feel emotionally and physically exhausted, and demonstrate low levels of involvement in teaching or concern for their students (Oster, 2007).

Ample evidence indicates that many teachers experience burnout and that it has both generic and specific antecedents (Cinamon, 2007). This may not only lead to poor teaching but might as well lead to individuals functioning less than their full potential (Hogan & McKnight, 2007). The stressfulness of teaching as an occupation is widely recognized because it may have an adverse effect on the performance

and efficiency of teachers. This in turn, effects might have a negative impact on the performance as well as on the wellbeing of the students they handle. Understanding burnout, its causes and effects, is the first step in the search for solutions to the problems it creates. Leading to its early detection and management. This study compares the burnout levels of the teachers when they are grouped in terms of selected characteristics and find out how various demographic and work-related factors affect burnout of faculty members, thus, providing a basis of a stress management program.

CONCEPTUAL FRAMEWORK

There is a general view that teacher burnout may have a negative impact on the teachers themselves, which leads to emotional and physical weakness on them. Consequently, demands to recognize significant factors contributing to teacher burnout and particular attention have been directed in analyzing the activities, programs, and strategies that teachers may employ to cope with burnout.

This paper was anchored on the concept postulated by Smith, Jaffe-Gill, Segal, J. and Segal, R. (2007), which states that "burnout is a state of emotional and physical exhaustion caused by excessive and prolonged stress". Likewise, Wagner and Hollenbeck (1995) pointed out that "if stress continues unabated, individuals may suffer burnout". Three broad areas from which stress may originate include the organization, personal factors, and the general environment (Mondy & Noe, 2005).

Figure 1 shows that age, gender, civil status, household size, monthly salary, status of employment, length of work experience, number of workload, administrative support, work relationship with co-faculty members, workload, student discipline problems, and availability of facilities are likely to contribute to the development of burnout due to excessive and constant stress. Claros' (2004) study revealed that the burnout level of the respondents was found to be influenced by age, civil status, and years in service.

Moreover, Kaufhold (2007) found that the lack of adequate supplies, together with the need of using out-of-pocket money to carry out their teaching tasks, causes high degree of frustration which, in some teachers, leads to burnout. Safety programs may accomplish their purposes in two primary ways: one focusing on unsafe employee actions and the other on unsafe working conditions. Regardless of the organization's size, the support of top management is essential if safety programs are to be effective (Mondy & Noe, 2005).

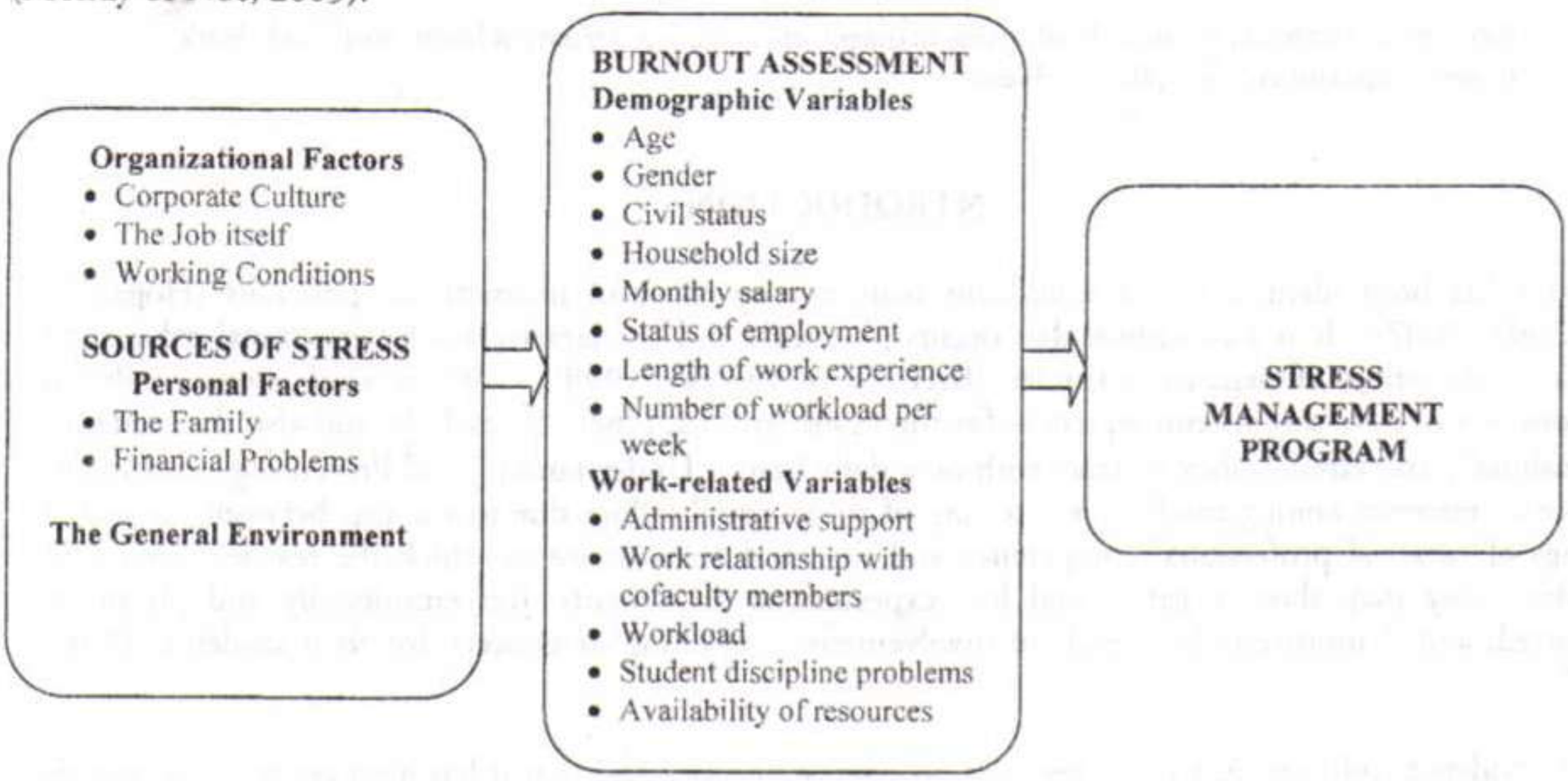


Figure 1. A model showing the factors that may affect the burnout level of faculty members in selected tertiary schools in Cavite

Removing personal and job and organizational stressors is the most straightforward way to prevent burnout (Kreitner & Kinicki, 1998). Results and findings derived from this study can be used as a basis in developing a stress management program that could minimize or buffer the effects of burnout experienced by the faculty members.

METHODOLOGY

This study was conducted in August to September 2008 in selected tertiary schools, namely; Cavite State University (CvSU) Main Campus in Indang, Cavite; De La Salle University- Dasmariñas (DLSU-D), Dasmarinas, Cavite; and City College of Tagaytay in Tagaytay City. Primary data were gathered through the use of structured questionnaire which is composed of three parts - demographic profile; work-related factors; and burnout inventory. A five-point Likert scale was used to quantify work-related factors and the burnout level. The Maslach Burnout Inventory – Educator's Survey and Claros' (2004) Burnout Questionnaire were used in developing the instrument. Respondents were selected using simple random technique based on the official teaching population in the three tertiary schools. Out of 696 distributed questionnaires, only 297 were valid. Hence, a sample size of 297 full-time and part-time faculty members during the first semester of academic year 2008-2009 were included.

Percentage, mean, and standard deviation were used as descriptive statistics to describe the demographic and work-related variables as well as the respondents' level of burnout. ANOVA was performed to determine if significant differences exist between the mean scores of respondents with regard to selected demographic and work-related variables. Multiple regression analysis was used to know whether the respondents' burnout level is affected by the selected demographic and work-related variables. Two regression models were ran, one is using demographic factors while the other one using more-related factors as the dependent variable.

$$BL_{df} = \alpha + \beta_1 Age + \beta 2Gen + \beta_3 CS + \beta_4 HS + \beta_5 MS + \beta_6 Emp + \beta_7 Exp + \beta_8 WL + e$$

where:

BL_{df}	=	Burnout Level
Age	=	Age (in years)
Gen	=	Gender (1=Female; 0=Male)
CS	=	Civil Status (1=Married; 0=Otherwise)
HS	=	Household Size
MS	=	Monthly Salary (in Php)
Emp	=	Status of Employment (1=Full-time; 0=Part-time)
Exp	=	Length of work experience (in years)
WL	=	Total number of workload in a week (in hours)

$$BL_{wrf} = \alpha + \beta_1 AP + \beta_2 WRel + \beta_3 WLod + \beta_4 SDP + \beta_5 F + \epsilon$$

where:

BL_{wrf}	=	Burnout level
AP	=	Administrative policies
WRel	=	Work relationship with cofaculty members
WLod	=	Workload
SDP	=	Student discipline problems
F	=	Availability of facilities

RESULTS AND DISCUSSION

Burnout level of the respondents. The mean burnout score of the faculty members is 2.00 which indicates a slightly moderate degree of burnout being experienced by the faculty members. About 63.1 percent has low level of burnout, 21.4 percent has moderate burnout level, while 15.5 percent has high level of burnout.

Table 1
Distribution of Respondents by Burnout Level, Cavite, 2008

Burnout level	Frequency	Percent
Low (0.00-2.00)	186	62.6
Moderate (2.01-4.00)	63	21.2
High (4.01-6.00)	46	15.5
No Answer	2	0.7
Total	297	100

Comparison of Burnout Levels by Demographic Variables

There is a significant difference ($p < .05$) in the burnout level of the faculty members when grouped by age (Table 2). As a faculty member gets older and more experienced, they may expect too much from themselves and from the school they work for. As pointed out by Whitehead (2000), midcareer groups are at the career achieving stage working toward promotions and trying to move up the pay scale. Inevitably, the need to perform and achieve tangible results can increase stress loadings on teachers. Personal and professional problems may also explain the age differences in levels of burnout. Faculty members in the 35 to 41 age bracket are more likely to be preoccupied with problems related to their families' welfare as well as problems with regards to personal and professional accomplishments. As age increases, the feeling of personal accomplishment decreases (Antoniou, Polychroni, & Walters, 1999).

Table 2
Comparison of Mean Burnout Scores by Respondents' Profile, Cavite, 2008

Characteristic	Highest score	Lowest score	Significance
Age	1.71 (35-41 years)	1.14 (49-55 years)	.0560
Gender	1.54 (Male)	1.43 (Married)	.7290
Marital Status	1.65 (Single)	1.16 (7-9)	.0100
Household Size	1.80 (10-12)	1.16 (7-9)	.1120
Monthly Salary	1.86 (20,000-24,999)	1.14 (40,000-44,999)	.0010
Employment Status	1.56 (Fulltime)	1.35 (Part-time)	.0710
Work Experience	1.80 (17-24 years)	1.23 (25-32 years)	.0500
Workload Per Week	1.66 (37-45 hours)	1.16 (1-9 years)	.0220

Male faculty members posted a higher mean score of 1.54 compared to females, however, there is no significant difference ($p > .05$) in their burnout level. This finding is supported by the study of Ozyurt, Hayran, and Sur (2006) where gender is not a significant predictor of experienced burnout.

Single faculty members have higher mean score of 1.65 compared to 1.43 for married ones of which the difference was found to be significant ($p < .05$) (Table 2). This finding is supported by the finding of Maslach, Schaufeli, and Leiter (2001) that the unmarried (especially men) seem to be more prone to

burnout compared with the married. It was further asserted by Korkijsammakul (1997) that employees who are single are more prone to burnout than divorced or widower and married as they have no social support from their family. Single faculty members tend to become more idealistic. If they cannot adapt to a bad system, they easily transfer from one employment to another without considering factors such as a family to feed and support.

Respondents' household size ranged from 1 to 12 persons with a mean of 4.44. The mean burnout score of faculty members with household size of 10 to 12 persons, registered the highest score at 1.80. Although the family is one of the personal factors that causes stress, no significant difference was found in the mean burnout scores of the faculty members.

Comparison of the burnout scores in terms of monthly salary shows that 9.5 percent of the respondents with salary ranging from PhP20,000 to PhP24,999 registered the highest mean score of 1.85. A significant difference exists in the burnout level of the faculty members when grouped by monthly salary. In times of economic crisis, faculty members with low monthly income are trying their best to make the most out of their income which in a way contributes to the degree of burnout they experience.

Fulltime faculty members registered higher mean score of 1.56, compared to part time faculty members with a mean score of 1.35 ($p < .05$). This may basically reflect the fact that full time faculty members are the ones spending greater portion of time in contact with students dealing with behavior and school problems as well as being able to meet the individual needs of students with a wide range of skills and personalities.

Assessment of the burnout scores of the faculty members in terms of length of work experience demonstrates that those who have been working for 17 to 24 years posted the highest mean score of 1.80 while those who have 25 to 32 years of work experience registered the lowest mean score of 1.23 ($p < .10$). Those who are just starting to work are most likely to experience low burnout. At this stage of their careers, they are still passionate on their jobs, very eager to prove themselves and to exhibit their knowledge and skills in their chosen jobs. Those who have worked for a quite sometime might have already lost their enthusiasm at work and feel to have not accomplished so much in their careers. This finding is supported by previous study of Claros (2004) which asserts that the longer the years in service, the higher the level of burnout.

Those with workload ranging from 37 to 45 hours a week registered the highest mean score of 1.66 while those with 10 to 18 hours a week registered the lowest mean score of 1.21 (Table 2) ($p < .10$). Having an additional administrative role in the school enhances stress and burnout. When there is no problem with overload, the work is varied and challenging and when the worker finds it significant, the more the person will experience personal self-fulfilment at work resulting in less burnout (Oster, 2007). Moreover, Whitehead (2000), pointed out that increased workload was found to be a significant contributor to stress and burnout among teachers.

Factors Affecting Burnout Level

Personal characteristics. Profiles such as age, gender, civil status, household size, monthly salary, status of employment, length of work experience, and number of workload per week contributed only 11.40 percent to the burnout of faculty members (Table 3). Variables such as civil status, monthly salary, and number of workload proved to be significantly ($p < .05$) affecting the burnout level of the respondents.

Table 3.
Regression Model Summary Between the Respondents' Burnout Score and the Demographic Variables, Cavite, 2008

Item	Regression coefficient	Std. eror	*t*-value	*p*-value
Age	0.003	0.020	0.164	.870
Gender	0.032	0.184	0.176	.861
Civil Status	-0.474	0.214	-2.215	.028
Household size	-0.073	0.053	-1.383	.168
Monthly salary	-0.177	0.052	-3.422	.001
Employment status	-0.092	0.314	-0.293	.770
Length of work experience	0.010	0.021	0.472	.637
Number of workload in a week	0.036	0.012	2.999	.003
R Squared = .1140				
F Value = 3.9880				
Significance = .0000				

Work-related variables. Regression analysis results proved that work-related variables such as administrative policies, work relationship with co-faculty members, workload, student discipline problems, and availability of facilities contributed only three percent to the burnout of faculty members. Table 4 shows that harmonious relationship with cofaculty members and balanced workload proved to be significantly affecting ($p < .10$) the burnout level of the respondents.

Table 4
Regression Model Summary Between The Respondents' Burnout Score and the Work-Related Variables, Cavite, 2008

Prediction	Regression coefficient	Std. error	*t*-value	*p*-value
Administrative Policies	0.170	0.139	2.600	.2230
Harmonious relationship with cofaculty members	-0.263	0.156	1.221	.0940
Balanced workload	0.273	0.142	-1.680	.0560
Student discipline problems	0.028	0.122	1.916	.8170
Availability of facilities	-0.155	0.141	0.231	.2740
R Squared = .0300				
F Value = 1.7540				
Significance = .1220				

Proposed Stress Management Program for Faculty Members in Selected Tertiary Schools in Cavite

Objectives

1. To improve work relationship and promote a harmonious work environment among the faculty members, their immediate superior and school administrators.
2. Reduce stressful situations by modifying or amending the school's policies and procedures concerning faculty members.
3. To provide the faculty members with workshops and seminars on how to reduce and cope up with stress.

Implementation

1. Improvement of work relationship and the promotion of harmonious work environment.
    a) Team-building activities should be conducted by the human resource department on a regular basis to improve camaraderie and teamwork among the faculty members, their superiors, and the administrators. Individuals should be trained to work as effective team players and develop their awareness on how they and their work relate to others.
    b) Conduct assertiveness training to the faculty members and encourage them to practice the concept in their everyday activities. Assertiveness training is a form of behavior therapy designed to help people stand up for themselves—to empower themselves, in more contemporary terms. Assertiveness is a response that seeks to maintain an appropriate balance between passivity and aggression. Assertive responses promote fairness and equality in human interactions, based on a positive sense of respect for self and others ("Assertiveness Training", 2007).
    c) Build and maintain comprehensible lines of communication between the faculty members and academic deans and school administrators by providing performance feedback.

2. To reduce stressful situations, modify, or amend the school's policies and procedures concerning faculty members.
    a) Increase participative decision making with regards to policies affecting the duties and responsibilities of a faculty member. They may participate in making decisions that affect them.
    b) Include faculty members in setting of goals and work scheduling to improve their sense of involvement in their work.
    c) Development of action plans in accordance with Health and Safety guidelines.

3. Providing the faculty members with workshops, seminars, and activities on how to reduce and cope up with stress.
    a) Facilitate professional and personal development activities by conducting trainings for the faculty members regarding stress management. In particular, the trainings should be focused on:
        - A lucid understanding of the meaning of stress and an awareness of the difference between pressure and stress.
        - An understanding of the sources and possible negative effects of stress so that faculty members can evaluate the impact of stress on both themselves and their environment.
        - Recognizing the signs and symptoms of their stress.
        - Adopting an attitude of personal responsibility for their own stress management, health, and well-being.
        - Providing practical strategies to help with preventing and managing stress in both the short term and the long term; including ways to circumvent stress, proper handling of stressful situations, responding proactively, thinking positively, managing change, and learning how to loosen up and revitalize.
            - Develop support group networks to relieve stress, and adopting enjoyable past times to counterbalance the unpleasantness of stress.
            - Achieving a good work-life balance by offsetting the unpleasant, stressful events in life with plenty of good, enjoyable events - make life more tolerable and reduce the risk of burnout.

CONCLUSION

While there are signs that the faculty members are experiencing some degrees of burnout, these burnout levels have not reached the point where it can be considered as a problem. After the data have been analyzed and interpreted, the following conclusions were drawn:

1. Sources of workplace stress leading to burnout may originate within the organization. Individual characteristics can also contribute to one's ability to cope with high stress work environments.
2. There are significant differences in the burnout level of the respondents in terms of age, civil status, employment status, monthly salary, length of work experience, and number of workload in a week.
3. There are significant differences in the burnout level of the respondents with regards to student discipline problems and availability of facilities.
4. Burnout level is affected by the demographic variables (age, gender, civil status, monthly salary, employment status, length of work experience, and number of workload in a week) and work-related variables (harmonious relationship with co faculty members and balanced workload).

RECOMMENDATIONS

In the light of the above findings and conclusions, the following are recommended:

1. The school administrators should be attentive to the health and safety needs of the faculty members, most especially in terms of demographic characteristics such as age, civil status, employment status, monthly salary, length of work experience and number of workload in a week; and with regards to work-related factors such as student discipline problems and availability of facilities.
2. The administration, along with the academic deans, should be made aware of the burnout condition of the faculty members, thus they can devise strategies and come up with programs that would address the problems that may cause burnout. In this manner, faculty members will find job satisfaction, self-efficiency, and growth towards a more balanced teaching career.
3. More support and interaction from colleagues, academic deans, and the school administrators that would create better relationship and work environment for the faculty members is recommended to assist in reducing stress that might lead to burnout.
4. The faculty members should be persuaded to adhere to different social and professional organizations in the school and in the community for personal and professional growth, thus, achieving a more balanced career.
5. The school should provide adequate facilities and resources to support the needs of the faculty members in their day-to-day teaching.
6. Provide greater personal guidance and support for teachers by hiring in-house professional psychologist or counselor that the faculty members can consult on times they feel stressed out.

REFERENCES

Antoniou, A. S., Polychroni, F. & Walters, B. (1999). *Sources of stress and professional burnout of teachers of special educational needs in Greece.* Retrieved October 15, 2007, from http://www.isec2000.org.uk/abstracts/papers_p/polychroni_1.htm

Claros, A. M. (2004). *The comparative analysis of the level of burnout and some related factors affecting teaching performance of public school teachers in East and North Cavite: Bases for burnout management program.* Unpublished graduate thesis, De La Salle University-Dasmariñas.

Cinamon, R. G. (2007). *Teachers' occupation-specific work-family conflict.* Retrieved October 9, 2007, from http://findarticles.com/p/articles/mi_m0JAX/is_3_55/ai_n18791409.

Hogan, R. L. & McKnight, M. A. (2007). Exploring burnout among university online instructors: An initial investigation. *Internet and Higher Education, 10,* 117–124. Retrieved from http://www.journal. au.edu/ au_thesis/thesis_coun14.html

Korkijsammakul, P. (1997). *A study in degree of burnout and ways of coping with stress of selected service employees in Bangkok Metropolis.* Retrieved November 1, 2007, from the http://www.journal.au.edu/au_thesis/thesis_coun14.html.

Kreitner, R. & Kinicki, A. (1998). *Organizational behavior.* McGraw Hill.

Maslach, C., Schaufeli, W. B. & Leiter, M. P.(2001). Job burnout. *Annu. Rev. Psychol. 2001.52,* 397–422.

Mondy, R. W. & Noe, R. M. (2005). *Human resource management.* Pearson Prentice-Hall, Inc.

Oster, J. (2007). *Factors of teacher turnover in church-related schools in a State Association of Christian Schools.* Unpublished doctoral dissertation, Liberty University.

Shimizu, T., Hiro, M., Mishima, N. & Nagata, S. (2002). Job Stress among Japanese Full-Time Occupational Physicians. *Journal of Occupational Health 2002, 44,* 348-354.

Smith, M., Jaffe-Gill, E., Segal, J., & Segal, R. (2007, January 29). *Burnout: signs, symptoms, and prevention.* Retrieved October 8, 2007, from http://www.helpguide.org/mental/ burnoutsignssymptoms.htm.

Wagner, J. A. & Hollenbeck, J. R. (1995), *Management of Organizational Behavior.* Prentice-Hall, Inc.

Whitehead, A. (2000). *Burnout among New Zealand primary school teachers.* Retrieved October 15, 2007, from http://findarticles.com/p/articles/mi_qa3848/is_200012/ai_n 8909905

Quality and Institutional Research Capabilities in Higher Education

THE LANGUAGE FUNCTIONS OF INTERNATIONAL CONFERENCE RESEARCH PAPER ABSTRACTS

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ABSTRACT

The language functions of research paper abstracts are so specific. They can be categorized into Textual metadiscourse and Interpersonal metadiscourse. This paper attempts to reveal the language functions expressed in the abstracts of research papers. It also reveals which one is the most dominant and which one the least dominant. This is content analysis and qualitative in nature. The documents are taken from the 45 paper abstracts of the three editions of SEAAIR proceeding publications (2005, 2006, and 2007). The model used for analyzing the data is the taxonomy of textual metadiscourse and interpersonal metadiscourse adopted from Hyland. The results show that there are five language functions expressed in the research paper abstracts such as (a) expressing semantic relation between main clauses; (b) explicitly referring to discourse acts/text stages; (c) helping reader grasp meanings of ideational material; (d) Withholding writer's full commitment to statements; and (e) Emphasizing force of writer's certainty in message. Expressing semantic relation between main clauses is found dominant while withholding writer's full commitment to statements the least dominant. It is apparent that the authors of the abstracts tend to use the dominant language function for making the abstracts brief.

Keywords: Genre, discourse community, textual Meta discourse, interpersonal Meta discourse

INTRODUCTION

Language functions expressed in an abstract look is very important. This is true because by understanding such language functions, the writer can make use of them. When revealing the most dominant language function, the writer can also pay attention to it for the purpose of writing. In academic article, abstract is always read before the full paper. Thus, writing an abstract is apparently (even) the most important part among other parts of the full paper. This research attempts to reveal the language functions expressed by the authors of SEAAIR conference paper abstracts. It also attempts to find both the most dominant language function and the least dominant one. The research method used was content analysis using the documents of SEAAIR conference paper abstracts published in 2005, 2006, and 2007. However, for the purpose of practicality (Ary, Jacob & Razavieh, 2002), 45 abstracts were taken for analysis (15 abstracts of each publication). Triangulation was done by employing another language expert who has experience in linguistic analysis and language teaching. The analyzed data based on the taxonomy were peer-debriefed and then checked for the validity of data analysis. By content analysis, it means that the abstracts are analyzed by using the taxonomy adopted from Hyland (1999) that is called textual space. In this case, the analysis is done based on the (a) textual metadiscourse and (b) interpersonal metadiscourse. The former consists of three language functions: (a) expressing semantic relation between phrases, clauses, and sentences; (b) explicitly referring to discourse acts/text stages; and (c) helping reader grasp meanings of

ideational material The latter entails two language functions: (a) withholding writer's full commitment to statements; and (b) emphasizing force of writer's certainty in message.

THEORETICAL FRAMEWORK

There are two aspects in detecting language functions. Hyland (1999) categorizes into textual metadiscourse and interpersonal metadiscourse. The former concerns three language functions: (a) expressing semantic relation between phrases, clauses, sentences (identified by logical connectors), (b) explicitly referring to discourse acts/text stages (identified by frame markers), and (c) helping reader grasp meanings of ideational material (identified by code glosses). The latter consists of two language functions: (a) withholding writer's full commitment to statements (identified by hedges), and (b) emphasizing force of writer's certainty in message (identified by emphatics). Like Hyland, Bret (1994) also stated that such language functions are considered specific to a certain discourse community.

The more the writers are acquainted with the language exponents, the more they can get involved as a member in the discourse community. In this case, discourse community is defined as a group of people involved in a particular disciplinary or professional area (e.g., teachers, linguists, doctors, engineers) in which the type of their discourse is known as genre (e.g., papers produced by SEAAIR). In addition, genre is defined as a social activity of a typical and recognizable kind in a community which is realized in language. Based on such arguments, it is imperative to reveal the language functions expressed in the abstracts of conference research papers.

Expressing semantic relationship (logical connectors). In writing research articles (RAs), the writer should provide readers with a glance of description to express the language efficiently (Tuckman, 1976; Daiker, 1994; May, 2004). In that case, it needs a semantic relation between phrases, clauses, and sentences to make the writing easily understood. Therefore, the relationship between ideas (coherence) in phrases, clauses, and sentences (Daiker, 1994, Hebert, 1998) should also be undertaken. By doing so, the writer provides the readers with the main theme or idea of the whole RA. Thus, to get language efficiency, the writer can make use of the language function expressing semantic relationship.

To reach such coherence mentioned above, the cohesiveness (undertaken by using linguistic devices) must also be undertaken so as to make the whole idea united. According to May (2004) the two terms above are simultaneously undertaken by the writer. Therefore, coherence and cohesiveness should exist in the same time in writing. Coherence refers to the interrelationship between ideas while cohesiveness refers to the interrelationship between linguistic representations. These representations are represented by logical connectors (May, 2004; Hebert, 1998). An example of semantic relationship between phrases, clauses, and sentences can be combined by *and* is whenever they show a series of semantic relationship. The phrases, clauses, or sentences can be coordinated in one sentence (Daiker, et al., 1994: 84).

In academic writing, the use of logical connectors can be helpful for writing a brief abstract (Hebert, 1990). Using logical connectors is a good strategy in academic writing. It is suggested that the writer should make use of logical connectors for being able to write in brief. Hyland (1999), for example, analyzed RAs and found that logical connectors are very often used. Randolph (1986) asserts that logical connectors have the function of expressing semantic relation between phrases, clauses, and sentences. Thus, the use of this grammatical category in writing is considered very important. By using logical connectors, all paragraphs of the research articles can be written in brief (Randoph, 1986; Daiker, 1994; Hyland, 1999).

Research articles are the texts that are textually constituted by grammatical categories related to arguments and the way to rephrase these arguments logically (Swales, 1990; Samraj, 2002). This is also the same as the assertion by Hebert (1994). In academic writing, efficiency of words and sentences should be undertaken. For example, Daiker (1994) and Randolph (1984) suggest that in making the paragraph coherent and cohesive, logical connectors would be of good grammatical devices. Halliday and Hassan, in Celce-Murcia and Larsen (1983), stated that logical connectors coordinate phrase, clauses, and sentences. They also have primarily semantic cohesive function which holds within or between surface structures.

Hebert (1994) asserted that a good quality abstract should be composed in a well-developed paragraph. To achieve such a criterion, making the abstract brief is important. Daiker (1994) and Schaetzel et al., (2004) provide some ways to write a well-developed paragraph by using transitions. The notable transistor is the type of additives signified by, among others, *and*. This connector can express semantic relation between phrases, clauses, and sentences (Randolph, 1986; Daiker, 1994; Hyland, 1999; Schaetzel, 2004). Other examples of logical connectors are identified by some linguistic devices such as, *however, also, as well as, in addition, thus, therefore, besides, similarly, whereas, nevertheless, accordingly*, and *while*.

Schaetzel (2004) asserts that language scholars have noted that in order to understand a text, readers need an ability to make judgments about what is central in the text. To provide the readers with an ability to make judgment, the writer must use grammatical devices to foreground what is central and more important.

The logical connector is also used to combine the two sentences, in that; it connects the two phrases, which function as a subject of a sentence. Randolph (1984) asserts that the phrases combined in any sentence show that there are semantically related phrases with the same level of linguistic units or in the form of chronologically sequential events. In reference to Randolph (1984) and Daiker (1994), the clauses can also be combined by means of "linguistic device" which is termed *and*. The linguistic device of *and* can be used for connecting the semantic meaning between sentences. Randolph (1984) and Daiker (1994) provide an example of the semantic relationship between sentences by putting *and* in two positions. According to them, (a) *and* can be put in the middle of a sentence (e.g., "He has long hair **and** (also) he wears jeans". Randolph, 1984: 552) and (2) it can also be put in the initial position (e.g., "*…She does, and her husband is left to reflect on her not as a woman he loved without tenderness but as a natural element that he needed for his own survival. **And** the reader is left to reflect too…*". Randolph, 1984: 562).

Besides a*nd*, the logical connector *also* is used to express semantic meaning. When using this linguistic device, the authors always relate to the previous sentences. The use of *also,* can be used for relating semantic meaning between sentences (Randolph, 1984: 568). In addition, *also* can be used for adding another point (Daiker et al., 1994: 143). Other linguistic devices which are used by the authors for expressing semantic relation between sentences are *however, in addition, thus, whereas, hence, nevertheless, besides, on the other hand, therefore, accordingly*, and *while*.

Explicitly referring to discourse acts/text stages (frame markers). This language function is identified by the linguistic device that is frame markers. So, analyzing this grammatical category in relation to the research on RAs is also important. In genre analysis, such element should also be investigated to determine the typical language of a certain discourse community. Some of the examples of frame markers suggested for research can be mentioned such as *this, these, the, it, those, also,* and the like. Other frame markers are e.g., *first, second, eventually, later, from, our, finally, further, they*, and *we* (Hyland, 1999). According to Bhatia (2001), such lexical elements need to be investigated. By doing so, the linguistic repertoires dealing with specific discourse community are known as the typical language as knowledge of the code is understood by the writers.

Grammatical devices expressing frame markers are the devices that the writers (speakers) use for some reasonable purposes. First of all, it is used to divide up what he is writing (saying). Secondly, it is used to help the readers (listeners) extract the main points from the texts (talks). Thirdly, it is used to identify introduction of a new topic or follow successive stages in a line of reasoning. Based on the argument above, frame markers seem to support the arguments as previously stated by the proponents such as (Randolph, 1986), Daiker (1994), Hyland (1999), Schaetzel (2004), and May (2006). They argued that frame markers have function to refer discourse acts or text stages. The argument above is supported by Jordan (1997), stating that frame markers are more prominent in terms of reasoning.

Helping reader grasp meanings of ideational material (code glosses). In a specific writing of a good abstract, the writer should express the whole RA. It should be written by focusing on both rhetorical moves and linguistic features (Samraj, 2002). The writer should also provide a summary of the research article by making use of the rhetorical moves (Bhatia, 1993). Yet, using code glosses, the writer can do it by adding some details to grasp a certain ideational meaning. It is true when considering the abstract writing requirement on the limitation of the number of the words. Code glosses make the writing so wordy. In the attempt of making academic writing in brief, it is important to see some examples of code glosses. This entails grammatical elements (e.g., *such as, by which the following*). According to May (2006) and Daiker (1994), when using such grammatical elements, the abstract will need more words.

Withholding writer's full commitment to statements (hedges). Hedges have a function for withholding writer's full commitment to statement. Hedges appear to be weakening the argument or statement in academic writing. Examples of these are *might not be, may be*, and *could possibly*. They are categorized as low commitment (Swale, 1990; Samraj, 2002; and Palmer, 1987). Like Swale and Samraj, Palmer also asserts that hedges in academic writing show low commitment. Therefore, the level of certainty of argument in academic writing is considered low. Alternatively, using another term, that is advice and requirement, by Richards (1999), hedges have implication of weak advice and requirements on what is being stated. In addition, they consider such hedges as down toners, weakeners, detensifiers, and understatements. Moreover, they stated that these linguistic devices show the writer's lack of commitment to the truth of a statement. The examples of hedges that weaken the argument can be expressed in modality (e.g. *could, possibly, probably,* and the like). It can be viewed from the level of commitment by taking into account the level or the degree of certainty (Palmer, 1987; and Randolph, 1984). It is advisable that the writers are aware of such grammatical categories in academic writing.

Hedges are vague for some reasons. First of all, according to Jordan (1997), hedging is considered "cautious language". It is said to be cautious language because without knowing the meaning, the writer always writes weak statements. Makaya and Bloor, in Jordan (1997), stated that authors need to be cautious in their claims and it is a common weakness of the writers to fail to modulate their utterances appropriately. It is necessary to write the claims and statements with certainty rather than vague language (hedging). Jordan (1997) provides examples of vague language such as, *perhaps, likely, possibly, probably,* and the like.

Unlike the arguments above, there is also argument stating that hedging is treated as important language. In his study about hedges, Jordan (1997) concludes that hedging is necessary and vitally an important skill. Selinker in Jordan (1997) asserts that the well-known practice to have skill of hedging in scientific writing is due to the fact that every attempt to explain a given phenomenon in a particular manner is open to an alternative explanation. Therefore, hedging language in academic writing is needed for such purposes. Like Salage-Meyer and Selinker, Skelton (1988a), argues that without hedging, the world is purely propositional, but with hedging, language is rendered more flexible and the world more subtle.

Thus, hedging language in writing can be treated as grammatical devices used for explaining the phenomenon in a particular manner. There are some varying degrees in stating the commitment and therefore, using hedges in such a circumstance is still acceptable.

Emphasizing force of writer's certainty in message (emphatics). Emphatics have a function for emphasizing force of writer's certainty in message in academic writing (Swales, 1990). The examples of the emphatics are *it is evident, generally, in general, it is important, it is apparent*, and so on. According to Swales (1990), Samraj (2002), and Palmer (1987), such emphatics are categorized into a high commitment to the statement. Based on such arguments, it can be described that the writers of academic writing, especially RAs, can make use of emphatics to provide the readers with certainty of the arguments. Quirk and Greenbaum (year) as in Celce Murcia (1993), observed certain emphatics both in adjective and adverbs, such as *definite(ly), certain(ly), absolute(ly),* and the like. They can be used for emphasizing the arguments with a certain degree of certainty. The results of analysis with the linguistic repertoires in research articles will provide readers with knowledge of certain discourse community (Bhatia, 2001).

FINDINGS AND DISCUSSION

The SEAAIR international conference paper abstracts provide some information about language functions and their prominence in abstract writing. First, "expressing semantic relation between phrases, clauses, and sentences" was proven to be the most dominant, which is 221 (65.19%). Second, it is "explicitly referring to discourse acts/text stages" with the frequency of 78 (23.21%). Third, it is "helping reader grasp meanings of ideational material" with the frequency of only 9 (2.65%), Fourth, it is "withholding writer's full commitment to statements" with the frequency of 11 (3.24%). Fifth, it is "emphasizing force of writer's certainty in message" with the frequency of 20 (5.90%). All these are presented in Table 1.

It can be interpreted that the authors of the international conference paper abstracts have the intention to write the abstract in brief. It can be justified that "expressing semantic relation between phrases, clauses, and sentences" tends to be the most important language function. This language function makes the paragraph (abstract) brief and concise May (2006) and Daiker (1994). For that reason, there is a tendency to utilize such language function so as to make the abstracts brief. The examples of such expressions are as follows.

Using "**and**" :

(1) Abstract no 40,e.g., "Our research investigates the impact of COL on the participation behavior of 135 tutors **and** 3903 students from one COL subject in the subject "Learning Skills" **and** three nonparticipation COL subjects in Mathematics, Marketing, **and** Human Resources Development"

Using " whereas" :

(1) Abstract no 10, e.g.," With the above results, we explained only 4.3% of the variation in the usage **whereas** the two constructs (PU and PEU) were able to explain an influential predictor of usage with perceived ease of the course website"

Table 1
Frequency of Language Functions

No.	Language function	Frequency	%
1	Express semantic relation between phrases, clauses, and sentences	221	65.19
2	Explicitly refer to discourse acts/text stages	78	23.21
3	Help reader grasp meanings of ideational material	9	2.65
4	Withhold writer's full commitment to statements	11	3.24
5	Emphasize force of writer's certainty in message	20	5.90
	Total	339	100

The second language function mostly is dominated by *this* and *these*, such as the following. The third language function is identified by *such as* and *in other words*. This is proved to be the least dominant. The examples are as follows.

> Abstract no 12: …**such as** book borrowing reference services- remains strong.
> Abstract no 28…. A region is defined **as** a direct environment of…

The fourth language function consist of *could possibly, may, may be, might be*. The fifth language function is identified by , *it is evident*…, in abstract no. 4;*mainly* abstract no 9; *interestingly* in abstract no. 25; *generally*, in abstract no. 25; *in general* abstract no. 36; *primarily* in abstract no. 29; *similarly*, in abstract no. 32; *it becomes apparent* in abstract no. 36; *relatively* in abstract no. 39; *it is important* in abstract no. 39 (twice) and no. 42; and *particularly*, in abstract no. 44.

The most interesting finding is that the language function of emphasizing force of writer's certainty in message comes to be the third in rank (90%). In writing the abstract, research argument and findings should be emphasized by the authors. This can deal with the analysis, finding, and conclusion and recommendation as written in the research paper.

CONCLUSION

The authors of SEAAIR international conference paper abstracts have the intention to write the abstract in brief. They attempt to use the language function of expressing semantic relation between phrases, clauses, and sentences. The most dominant language functions are *and, also,* and *but.*

The least dominant language function is "helping reader grasp meanings of ideational material". It can be assumed that the explanation of any term or technical terms related to the research cannot be done in the abstracts. Such explanation should be provided in the full paper. When it is explained in the abstract, it can make the abstract wordy. Accordingly, the abstract must not be complied with the reviewers' criteria for the judgment of acceptance. In general, SEAAIR abstracts which have undergone blind review can be considered to have been complied with the criterion of being written in brief. To achieve objectivity, the authors use logical connectors which express semantic relation between phrases, clauses, and sentences. On the authors' point of view, there is also a tendency not to use emphatics for "emphasizing claims".

REFERENCES

Ary, D., Jacobs, L. C., & Razavieh, A. (2002). *Introduction to research in education* (6th ed.). Belmont, CA: Wardsworth/ Thomson Learning.

Bhatia, V. K. (2001). Applied genre in ESP. *Journal of Engineering Education*. Retrieved April 24, 2006, from http://www.elsevier.com/locate/contendirect./

Bhatia, V. K. (2002). A generic view of academic discourse in John Flowerdew (ed.), *Academic Discourse*. London: Pearson Education.

Brett, P. (1994). A genre analysis of the results section of sociology articles. *Journal of English for Specific Purposes*, 13(1), 47-59.

Carter, R., Hughes R., & McCarthy M. J. (1997). *Working with texts: A core book for language analysis*. London: Routlgde.

Dudley, E T. (1995). *Genre approaches: Genre models for the teaching of academic writing*. Retrieved May 5, 2006 from http://www.findarticles.com/p/articles/tn_ref./

Daiker, D. et al. (1994). *The writer's options* (5th ed.). New York: Harper College Publishers.

Fraenkel, J. R. & Wallen, N. E. (1996). *How to design and evaluate research in education*. New York: McGraw-Hill, Inc.

Hayland, K. (1992). Genre analysis: Just another fad?, *English Teaching Forum, 30*(2), 14-17.

Talking to Students: Metadiscourse in Introductory Textbooks. (1999b) *English for Specific Purposes, 18*(1), 3-26.

Halliday, M. A. K. (1973). Towards a sociological semantics In Teaching. In Brumfit, C.J and K. Johnson, *The Communicative Approach to Language Teaching*. London: Oxford University Press.

An Introduction to Functional Grammar (4th ed.). (1994). London: St. Martin's Press Inc.

Jordan, R. R. (1997). *English for academic purposes: A guide and resource book for teachers*. Melbourne: Cambridge University Press.

McCarthy, M. (2001). *Issues in applied linguistics*. Cambridge: Cambridge University Press.

Murcia, C. M. & McIntosh, L. (1979). *Teaching English as a second language*. Massachusetts: Newbury House Publishers, Inc.

May, C. B. & Gordon, S. M. (2006). *Effective writing* (7th ed.). New Jersey: Pearson Prentice Hall.

Palmer, F. R. 1987. *Modality and the English modals*. London: Longman.

Richards, J. C., & Smith, R. (2002). *Dictionary of language teaching and applied linguistics*. Singapore: Longman group.

Samraj, B. (2002). Disciplinary variation in abstracts: The case of wildlife behavior and conservation biology, in Flower Dew (ed.). *Academic Discourse*. London: Pearson Education.

Swales, J. M. (1990). *Genre analysis: English in academic and research settings*. Cambridge: Cambridge University Press.

Tuckman, B. W. (1976). *Conducting educational research*. Orlando: Harcourt Brace Jovanovich Publishers.

Widdowson, H. (1978). *Teaching language as communication*. London: Oxford University Press.

ASSESSMENT SURVEYS IN MEASURING QUALITY IN THE TOURISM MANAGEMENT PROGRAM AT SUKHOTAHI THAMMATHIRAT OPEN UNIVERSITY

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ABSTRACT

The objectives of this research were to survey on the opinions of current and former students in their career path after graduation from a BBA in Tourism Management at Sukhothai Thammathirat Open University (STOU), and to assess the perceived level of knowledge and skills learned from the program, the perceived value of the courses and instructional media. It is hoped that this will improve the competency of graduates to meet the demand and to develop the distance learning system more efficiently.

A population of 572 students compared the current and former students from the School of Management Science, majoring in Tourism Management from 2001 to 2006. A questionnaire was used for collecting data. Statistical tools employed were frequency, percentage, mean and standard deviation which were analyzed using SPSS.

The research findings showed that the main purpose of most respondents (81.3%) of studying was to acquire knowledge. For opinions regarding career path after graduation, 45 percent of respondents expected compensation increases while 47.1 percent expected to remain in the same positions. For assessment of knowledge and skills, respondents rated the level of knowledge learned at a medium to high level. Assessment of job skills were and at a value of courses and internship. Assessment of was at a high level. Assessment of knowledge learned from instructional media was at a low to high level. Assessment of using main media, including textbooks and workbooks was at a medium to high level. The research findings have some implications for the SMS on revising the Tourism Management curriculum and development of more electronic learning systems and interactive student activities.

Keywords: measuring quality, assessment survey, tourism management program

INTRODUCTION

One of the most challenging tasks to improve teaching and learning quality is to assess academic programs as well as institutional effectiveness. Various surveys of university quality were developed by academicians to help academic institutions meet the demand of governing boards, accrediting agencies, and other related stakeholders (Borden & Owen 2001). Sukhothai Thammathirat Open University (STOU) was established in September 1978 as one of the open universities in Southeast Asia to use the distance learning system. As an open university, STOU subscribes to the principle of life-long education, aims to improve the quality of life of the population, seeks to upgrade the educational and professional qualifications of working people, and strives to expand educational opportunities for the general public.

To achieve these objectives, STOU has devised a distance learning system which employs such instructional media as correspondence printed materials, radio and television programs, satellite programs, computer-assisted instruction (CAI), audio and video on demand, tutorials, professional experience activities, and online learning.

The School of Management Science (SMS) was established in 1979 to produce quality graduates and promote research in Management Science in order to enhance economic and social development. The school offers a number of programs in Business Administration and Public Administration. In particular, the Bachelor Degree in Business Administration Program in Tourism Management has been developed and taught in the School of Management Science since June 2002 for applicants with a higher vocational certificate in Tourism, Hotel Management or Business Administration. To assure the quality of education, it is therefore now time to assess the effectiveness of the programs and the competence of the graduates.

The tourism management program structure requires students to study around 12 to 18 courses or 72 to 108 credits, comprising one general education course, 10 to 16 area-specific courses, and one open elective course. Program details cover one general course and 10 area-specific courses including Thai Studies, English for Tourism, Principles of Accounting, Introduction to the Tourism Industry, Tourism Resources in Thailand, Marketing Strategies in the Tourism Industry, Information Systems for Tourism Management, Professional Experiences in Tourism Management, and one chosen area of concentration from Tourism Business Concentration and Meeting Incentive Convention and Exhibition (MICE) concentration. Students without work experience in the tourism industry must undertake relevant internship in accordance with the requirements of the university.

Objectives of the Study

The objectives of this research were (a) to survey opinions of current and former students regarding career path after graduation from a BBA in Tourism Management at STOU; and (b) to assess the perceived level of knowledge and skills learned from the program, the perceived value of the courses and instructional media in order to improve the production of graduates to meet the demand and to develop the distance learning system more efficiently.

METHODOLOGY

A total of 572 current and former students from the School of Management Science, majoring in Tourism Management from year 2001 to 2006, was the subject of the study. The whole population was small, hence, opinions of the population were considered. A questionnaire was used in data collection. The questionnaire consists of five parts: the first part concerns opinions regarding career path after graduation, the second part is about the perceived level of knowledge and skills learned from the program, the third part asks about the perceived level and value of the teaching materials, the fourth part is about instructional media, and the last part is open-ended for recommendations on how to improve the overall aspects of the program. All items in the instrument used a five-point Likert scale with the following opinion ratings: 1-"Strongly Disagree", 2-"Disagree", 3-"Neutral", 4-"Agree", and 5-"Strongly Agree". After obtaining opinion ratings, they were converted to the assessment level. The mean opinion ratings between 1.00-1.49, 1.50-2.49, 2.50-3.49, 3.50-4.49, and 4.50-5.00 were considered to be "lowest", "low", "medium", "high", and "highest", respectively. Internal consistency coefficient for the instrument was calculated using Cronbach's alpha and found to be 0.892. Descriptive statistical analysis was used to analyze data, and statistical tools employed were frequency, percentage, mean, and standard deviation.

For data collection, 572 questionnaires were distributed by post to current respondents around Thailand between July and August 2008. Of this number, 258 questionnaires were returned with a response rate of 45.10 percent. Profiles of respondents were 183 females (76.3%) and 57 males (23.8%) with age mostly

between 20 and 29 years old. 32 percent of the respondents resided in the south of Thailand while 25.4, 15, and 14.6 percent lived in the central, north, and northeast regions, respectively. More than half of the respondents (52.3%) were employed in the private sector, while 12.1 percent worked for the government. About 13.3 percent had their own businesses, and only 7.5 percent were unemployed. The majority of sample had worked for nearly nine years on average and earned about 20,000 baht per month.

RESULTS AND DISCUSSION

The research findings showed that the main purpose of study of most respondents (81.3%) was to acquire knowledge, while 75.4 percent wanted to learn and apply knowledge to work. About 63.3 percent wished to obtain a bachelor degree in tourism, and 58.3 percent desired to improve their employment status. Regarding anticipated changes after graduation, almost half of the respondents (45%) expected compensation increases, while 38.6 percent estimated the same level of compensation. For job promotion after graduation, 47.1 percent of the respondents expected to remain in the same positions. These results confirmed the same findings as the previous study of Kachentaraphan et al. (1996) that most of the distance-learning students were employed and already held some positions in their industry, so they would not anticipate major career changes after graduation. About 23.3 percent hoped for promotion within the same area and 12.9 percent wished for promotion in different lines of work. For responsible jobs, 44.2 percent was likely to maintain a similar line of responsibilities, 21.3 percent hoped to change jobs within the same area, and 17.1 percent wished to get a new job in a new environment. In particular, more than half of the respondents (64.6%) possessed jobs in the hospitality and tourism industry whereas 72.9 percent of those who did not hold jobs in the tourism industry wished to work in the industry after graduation.

For assessment of knowledge and skills, the results indicated that the respondents rated the level of knowledge learned at a medium to high level. General knowledge was high, ranking from ability to communicate in Thai in many situations, ability to adapt themselves in current situations and ability to value Thai art and culture These results revealed similar findings to the study of Sithilertprasit (2007), so were the findings on skill assessment that showed a high level of job skills. Assessment of the level of job skills learned was all at a high level, ranking from professional ethics, ability to work with people, and enthusiasm in searching for new professional knowledge. Table 1 shows the mean and standard deviation of the level of knowledge and skills learned.

The results showed that value assessments of the core and area-specific courses were all at high levels. The highest valued courses were English for Tourism, Professional Experiences in Tourism Management, and Introduction to Tourism Industry. Table 2 exhibits the value assessment of the core and area-specific courses.

Table 3 shows that the value assessment of the elective courses and internship was also at a high level because respondents learned to develop a service mind, experienced how to work with others, and obtained service skills during the internship period.

Ruangsrimun and others (2001), due to the fact that textbooks and workbooks were the core media, which had been prepared and written precisely by numerous experts in the field. On the other hand, the radio and television programs were assessed at a low level because they are usually broadcast according to a timetable that may be inconvenient for many students who are working full time. Likewise, tutorial sessions were only provided for core or area-specific courses that a large number of students enrol, so the respondents rated tutorial sessions at a low level due to a lack of tutorial sessions for many area-specific courses. Most of the respondents used textbooks and self-evaluation tests in workbooks before and after studying. They studied textbooks and summarized the concepts at a medium level. Table 4 shows the assessment of the instructional media.

CONCLUSION AND RECOMMENDATIONS

The main purpose of study of most respondents is to acquire knowledge. On career changes after graduation, almost half of the respondents expect an increase in compensation increases. However, almost half of the respondents expect to remain in the same positions, and was likely to maintain similar jobs or responsibilities. Knowledge and skills, the results indicated that the respondents had rated the level of knowledge learned at a medium to high level and the level of job skills learned at a high level in all skills. Similarly, courses and internship are rated at a high level. With regard to instructional media, the assessment of knowledge learned from educational media is at a low to high level. The highest value was the printed materials and the lowest is the radio programs. On the use of printed materials and workbooks, assessment of using main media including textbooks and workbooks is between medium and high levels.

In order to support student careers, the respondents recommended the following: introducing additional courses such as English for Hospitality, Personality Development, Service Psychology and Tourist Behavior, and Tour Guiding; producing up-to-date content materials; producing more multimedia CD, VCD, DVD, and introducing e-learning lessons. Activities for student development were good with some recommendations on more interactive activities among students and networking among students in various provinces are also suggested by the respondents.

INSTITUTIONAL IMPLICATION OF THE RESEARCH FINDINGS

The research findings have some implications for the School of Management Science on revising the Tourism Management curriculum and the development of more electronic learning systems and interactive student activities. To assure the quality of higher education, the existing Tourism Management Program should be revised to meet the demands of current and former students as well as the industry. Examples of this are updating major content materials, simplifying and condensing some difficult contents and adding some additional courses such as English for Hospitality, Tour Guiding, and Personality Development. For development of learning systems, STOU should provide supplementary electronic learning systems, such as on-line tutorials and e-learning to support student learning knowledge and skills because the advancement of technology nowadays makes it easier for everyone to communicate through the Internet. This is consistent with the current university policy to include e-learning as supplementary learning channel. Moreover, STOU should improve the quality of multimedia, such as CD, VCD, and DVD. In addition, STOU should provide some interactive student activities and networking such as organizing some discussion forums or socialized activities in several regions of Thailand, as well as providing social networks via the Internet for interactivity among students.

Table 1
Level of Knowledge and Skills

No.	Knowledge and Skill	Mean	Standard deviation	Assessment level
Knowledge				
1	Communication in Thai language	4.13	0.66	High
2	Communication in English language	3.36	0.91	Medium
3	Writing report	3.33	0.75	Medium
4	Understanding economy and society	3.54	0.72	High
5	Understanding democracy	3.40	0.72	Medium
6	Understanding value of Thai arts and culture	3.91	0.66	High
7	Ability to adapt in current situations	4.06	0.71	High
Skills				
8	Rational thinking	3.98	0.65	High
9	Listening to other opinions	4.13	0.65	High
10	Working with other people	4.19	0.67	High
11	Problem solving at work	3.92	0.70	High
12	Enthusiasm in searching for new professional knowledge	4.15	0.69	High
13	Application of knowledge to work	4.08	0.75	High
14	Professional ethics	4.35	0.65	High

Table 2
Value of the Core and Area-specific Courses

No.	Core and area-specific course	Mean	Standard deviation	Assessment level
1	Thai Studies	3.74	0.89	High
2	Principles of Accounting	3.35	0.96	High
3	English for Tourism	4.40	0.76	High
4	Introduction to Tourism Industry	4.11	0.78	High
5	Tourism Resources in Thailand	4.10	0.78	High
6	Marketing Strategies in Tourism Industry	4.06	0.76	High
7	Information System for Tourism Management	3.97	0.81	High
8	Experiences in Tourism Management	4.30	0.80	High

Table 3
Value of the Elective Courses and Internship

No.	Course	Mean	Standard deviation	Assessment level
Elective Course				
1	Tourism Business Management	4.03	0.81	High
2	Tourism Resource Management	4.03	0.79	High
3	Recreation and Nature Tourism Management	3.92	0.87	High
4	Convention Management	3.71	0.93	High
5	Exhibition Management	3.59	1.05	High
6	Incentive Management	3.59	1.01	High
Internship				High
7	Knowledge learned from internship	4.21	0.77	High
8	Service skills	4.26	0.69	High
9	Service mind	4.41	0.64	High
10	Experience how to work with others	4.41	0.67	High

Table 4
Value of the Instructional Media

No.	Instructional Media	Mean	Standard deviation	Assessment level
Knowledge learned from each media				
1	Printed Materials	4.41	0.71	High
2	Television Broadcast programs	2.23	1.09	Low
3	Radio programs	1.96	0.99	Low
4	Audio CDs	3.32	1.15	Medium
5	Tutorial sessions	2.19	1.17	Low
Use of textbooks and workbooks				
1	Study textbooks and take pre-post tests	4.32	0.82	High
2	Study textbooks and summarize key concepts in workbooks	3.88	0.92	Medium
3	Take pre-post self-evaluation tests	4.13	0.94	High

REFERENCES

Borden, M. H., & Owen, L. Z. (2001). *Measuring quality: choosing among surveys and other assessments of college quality.* Tallahassee: Association for Institutional Research.

Kachentaraphan, Paiboon, et al. (1996). *Final report on follow-up graduates in the Communication Arts Program,* Nonthaburi: School of Communication Arts, Sukhothai Thammathirat Open University.

Ruangsrimun, Piyasiri, et al. (2001). *Final report on follow-up graduates in the Economic Program,* Nonthaburi: School of Economics, Sukhothai Thammathirat Open University.

Sithilertprasit, S. (2007). *Final report on follow-up graduates in the Accounting Program,* Nonthaburi: School of Management Science, Sukhothai Thammathirat Open University.

DEVELOPMENT OF RESEARCH-INTENSIVE CURRICULUM USING COMMUNITY PARTICIPATORY APPROACH

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ABSTRACT

Technology of participation was used in this action research to develop research-intensive curriculum for BS in Public Administration (BSPA) and BS in Community Development (BSCD). Relevant information were gathered from the needs, experiences, and practices of stakeholders, students, faculty, administration, alumni, community leaders and industry representatives and were processed quantitatively and qualitatively. The BSPA and BSCD curricula are enriched by the inclusion of 12 (36 units) courses that are field-based and research-based, where students explore and study in the community laboratories with their mentors. Common to the BSPA and BSCD curricula are research-related subjects that include Introduction to Statistics, Statistics for Social Sciences, Quantitative Research Methods, Qualitative Research Methods, Data Mining and Simulation, and Undergraduate Thesis Writing.

Representatives of Non-Government Organizations (NGOs), Local Government Units (LGUs), and National Government Agencies (NGAs), have identified the dearth of indigenous knowledge system in the community where sensible information could emanate from as the cause of poor local planning and development. Thus, they have posited the need to interlock theory-practice-research to produce better qualified graduates and to enable a continuing curriculum enhancement through the documented gains and challenges met along the way.

Keywords: Action research, curriculum, public administration, community development

INTRODUCTION

The role of the higher education institutions (HEIs) in the development and governance of communities is very important. Aside from molding the characters of the youth, the HEIs develop leaders who would be at the forefront of community development and governance. In this modern age of borderless global economy, knowledge and skills acquisition has become the ultimate leverage point to bring on the task of improving peoples lives through promoting peace, equality, and social justice.

The world's problems have become very complex and pressing each time the reality is explored through the development challenges and the call of the various sectors of society for massive institutional reforms. There is a need to heighten and drumbeat the promotion of Millennium Development Goals (MDGs) in poverty eradication, primary education, maternal health, gender equality, environmental sustainability, combating child mortality, AIDS, and other dreadful diseases.

This curriculum enhancement project is made to respond to the challenges of this modern world by bringing on the challenge using the town-and-gown approach to local community development and

governance. The town-and-gown approach implies a relationship between the "town" which is the community or the local government and the "gown" which is the university located in the local area. The relationship is seen to be more of a partnership where each partner shares its resources for a common cause or goal, which is the development of the local community.

The College of Governance, Business and Economics of the University of Southeastern Philippines offers BSPA and BSCD programs in Mintal Campus, Davao City, Philippines. The BSPA and BSCD programs are under the Department of Governance Studies and Department of Development Studies, respectively. These academic programs have been offered by the college for 43 years now. The governing minimum standards for BSPA under Commission on Higher Education are CHED Memo Order (CMO) Number 27 series of 2001 or the Revised Policies, Rules and Guidelines for Business and Management Education and CMO Number 59 series of 1996 or the General Education Curriculum.

The study has the following specific objectives:
1. To enrich the academic programs by providing them with a distinct set of core competencies; and
2. To strengthen the BSPA and BSCD programs by including more fieldwork and research courses.

LITERATURE REVIEW

Action research has been used in many areas where an understanding of complex social situations has been sought in order to improve the quality of life. Among these are industrial, health, education, and community work settings (McKernan, 1995).

Action research methodology offers a systematic approach to introducing innovations in teaching and learning. It seeks to do this by putting the teacher in the dual role of producer of educational theory and user of that theory. This is both a way of producing knowledge about higher education learning and teaching and a powerful way of improving learning and teaching practice. No separation need be made between the design and delivery of teaching, and the process of researching these activities, thereby bringing theory and practice closer together (Riding et al., 1995).

A variety of forms of action research have evolved (McTaggart & Kemmis, 1988). All adopt a methodical, iterative approach embracing problem identification, action planning, implementation, evaluation, and reflection. The insights gained from the initial cycle feed into the planning of the second cycle, for which the action plan is modified and the research process repeated.

METHODOLOGY

The technology of participation was used in this study. This approach enabled the academic community – faculty; administration; students; and representatives of nongovernment organizations, government organizations, and national government agencies to analyze, review and share their insights on how to improve the existing curriculum. This means learning from them directly by taking their related experiences; flexible use of methods; offsetting biases by being unimposing, and by learning their concerns and priorities; facilitating investigation, analysis, presentation, and learning from the people themselves, so that they present and own the outcomes and also learn; and lastly, sharing of information and ideas between them and the researcher, and among other stakeholders. Proceedings of this inquiry were referred to the University Council through the University Curriculum Committee before the subsequent approval of the Board of Regents.

Data triangulation method was employed to validate the participatory research approach sequences. It included a mix of structured interview questionnaire, focus group discussion, and data validation through key informants' interview.

The data for this study was collected from First Semester of SY 2007-2008 to Second Semester of SY 2009-2010. The stakeholders were given printed copies of the course prospectus of BSPA and BSCD for their comments. They were also requested to indicate any relevant change in the curriculum and the reasons for such change. Respondents were informed of the CHED Minimum Standards covering these programs that cannot be abridged. While waiting for the comments, a series of benchmarking activities was conducted in universities and colleges offering the same academic programs. A total of 75 respondents were involved in this study.

RESULTS

Profile of stakeholders. Table 1 presents the representation of stakeholders during the culmination of BSPA and BSCD curriculum enhancement on January 26, 2009. Full-time faculty members teaching BSPA and BSCD subjects constituted 15 or 20 percent of the total number of stakeholders. Students composed 23 percent; LGU representatives, 16 percent; NGO representatives, 12 percent; NGA representatives, 11 percent; alumni, 9 percent; and private sector representatives, 9 percent.

Table 1
Distribution of Stakeholders According to Stratum

Stratum	Frequency	Percentage
Students	17	23
Faculty	15	20
Alumni	7	9
NGO	9	12
NGA	8	11
LGU	12	16
Private Sector	7	9
Total	75	100

Program core competencies. Table 2 presents the sets of program core competencies for BSPA and BSCD programs. These competencies were identified by the stakeholders during the consultation. These core competencies were identified to provide the BSPA and BSCD programs with distinct target characteristics for its graduates. Each competency is based on the current and proposed revision/enhancement in the subjects under the curriculum.

Table 2
Program Core Competencies

BS in Community Development	BS in Public Administration
Community Organizing	Policy Analysis
Resource Mobilization	Strategic Planning
Development Planning	Performance Measurement
Project Development, Implementation, Monitoring and Evaluation	Project Detail Management and Statistics
	Resource Management
Qualitative and Quantitative Decision Making	Quantitative and Qualitative Decision Making
Peace Building	Knowledge Management
Disaster Risk Management	Enterprise Management
Work Ethics	Work Ethics

Inclusion of more research courses. Under the new BSPA and BSCD curricula, the number of research subjects is increased from 3 or 9 units to 5 or 15 units. Representatives of the NGOs and POs strongly suggested for the inclusion of data mining and simulation under the BSCD and public policy analysis under the BSPA. These subjects are seen to support the current industry need of graduates who can help make policy alternatives and rich databases ready for sharing and utilization to end-users of information. They suggested that graduates should be thoroughly trained to become leaders who are active decision makers in their fields and not just mere recipients of decisions made for them by their peers.

Table 3
Comparison of Research Subjects Under Old and New BSPA and BSCD Curriculum

BS in Public Administration		BS in Community Development	
Old	New	Old	New
Introduction to Statistics *(3 units)*	Introduction to Statistics *(3 units)*	Introduction to Statistics *(3 units)*	Introduction to Statistics *(3 units)*
	Quantitative Research Methods *(3 units)*		Quantitative Research Methods *(3 units)*
Basic Research Methods *(3 units)*	Qualitative Research Methods *(3 units)*	Basic Research Methods *(3 units)*	Qualitative Research Methods *(3 units)*
Thesis Writing *(3 units)*	Thesis Writing *(3 units)*	Thesis Writing *(3 units)*	Thesis Writing *(3 units)*
-	Public Policy Analysis *(3 units)*	-	Data Mining and Simulation *(3 units)*
9 units	15 units	9 units	15 units

Hierarchical arrangement of subjects. Figure 1 shows how the quantitative and qualitative decision making as a competency is being supported by subjects in the BSPA and BSCD curriculum that scaffold it. Research Methods under the new curricula is divided into two major courses—quantitative research methods and qualitative research methods. The stakeholders identified this as a necessity to provide students with a good background in research and/or undergraduate thesis writing. Project management is now divided into two major subjects—project development; and project implementation, monitoring and evaluation. This happened because the stakeholders unanimously saw the importance of giving students more time to experience and learn project management as a judicious process of searching for solutions to problems.

As shown in Figure 1, major subjects in the BSPA and BSCD curricula are arranged in a hierarchical and logical manner. Subjects found at the bottom part of the figure are General Education subjects which are prerequisites of the next higher major subjects. The next higher level subjects in the hierarchy are the ones that will be taken by students on their third year. The next higher subjects are the ones to be taken by students during their fourth year.

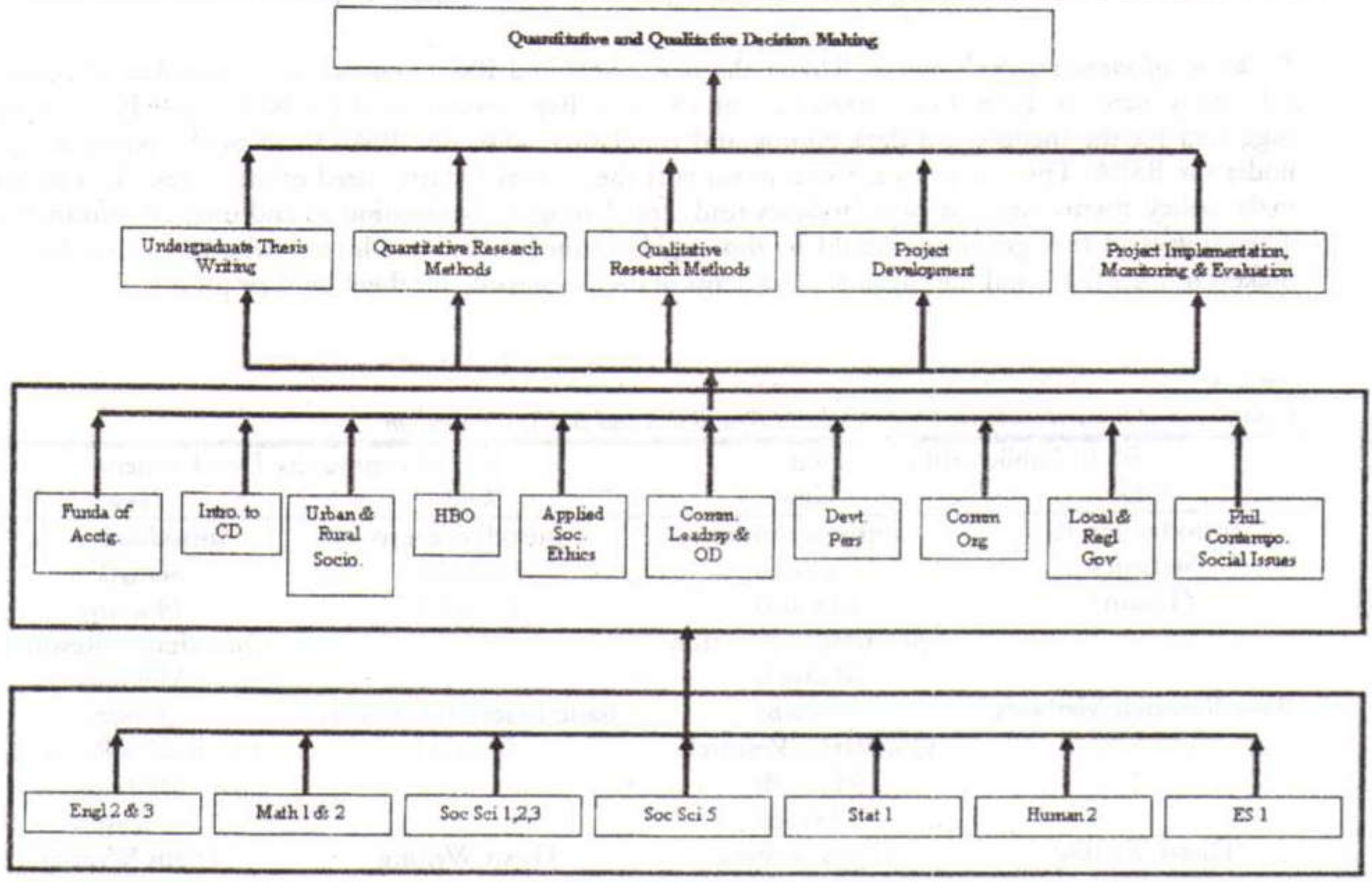


Figure 1. Hierarchical Arrangement of Research Courses

Other issues and concerns and corresponding recommendations. The BSPA and BSCD stakeholders have corroborated with the agreements on the revised curricula. Table 4 presents the agreements and corresponding lessons learned during the deliberation process.

Table 4
Issues and Recommendations

Issues/Concerns	Recommendations
NGA, LGU and NGO representatives' participation in the curriculum review is very limited.	Involved more industry representatives in the future curriculum revision.
There has been no serious effort to trace graduates' employment and other career advancement updates in the College.	Conduct Alumni Tracer Study specifically to measure employability of graduates of BSPA and BSCD.
There is no available information about common issues and concerns relating to students and faculty performance in the classroom.	Conduct more action research in the classroom to monitor and evaluate the quality and effectiveness of instruction, research and extension along public administration and community development
Curriculum revision is not regularly done.	Conduct curriculum revision every four years.

CONCLUSION

The best way to review curricular programs is through community participatory approach in which stakeholders share their views, experiences and expectations for the academic programs they are most concerned about. Setting of core competencies provided the BSPA and BSCD programs a clearer perspective of what these have to offer to students to become better and leading professionals in their field of work.

The hierarchical arrangement of subjects according to their prerequisites and target core competency is one best way to avoid redundancy, inappropriateness, non-alignment and randomness of subject load, requirements, and resources. Arranging the subjects according to hierarchy gives a well-meaning direction to students, parents, instructors and administrators. Monitoring and evaluation of these programs are believed to be a lot easier now as subject description, content and requirements are already set according to the course bulletin developed as a result of this undertaking.

The inclusion of more research-intensive subjects in the BSPA and BSCD curricula is considered a necessity to give students more opportunity to learn, experience and unlearn research skills. Students trained and developed under these curricula are believed to possess genuine passion for research and decision making. They are also seen to become leaders in their respective field of work after graduation.

REFERENCES

Kernan, J. (1991). *Curriculum action research*. London: Kogan Press.

McTaggart, R. & Kemmis, S. (1988). *The action research planner* (3rd ed.). Victoria, Australia: Deakin University Press.

Riding, Phil, Fowell, Sue and Levy, P. (1995). An action research approach to curriculum development. *Information Research, 1*(1). Retrieved from http://InformationR.net/ir/l-l/paper2.html

PEER REVIEWERS' EVALUATION OF THE QUALITY OF FACULTY RESEARCHERS OF A PHILIPPINE UNIVERSITY

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ABSTRACT

A documentary analysis of peer review results of studies determined the quality of faculty researches of a Philippine University two years after the peer review system was adopted. The study found that mechanisms are in place for the development of a research culture. The strict refereeing process that yielded a high rejection rate is a sound mechanism that identifies researches with potential for utilization and publication in a refereed journal and ensures the integrity of the university's publications. The results of ratings on the quality of faculty researches is satisfactory in the substantive, methodological, and style aspects as evaluated by peer reviewers from the Visayas and Mindanao. However, the qualitative evaluation of the reviewers reveals that the researches have deficiencies along research conceptualization, analysis, and interpretation of research, indicating that the studies are barely adequate to meet the requirement for international refereed publication. The acceptance rate of researches is 55 percent while the rejection rate is 45 percent, suggesting that 1 out of 2 researches by faculty may be accepted by the reviewers.

Keywords: Documentary analysis, peer review, quality of researches

INTRODUCTION

The reviewing system was launched in 2004. It was of free style wherein reviewers wrote their comments on the manuscripts. The comments were not summarized. There was no structured form that could accommodate their quantitative and qualitative evaluations. In 2006, a structured form was adopted that provided qualitative and quantitative data from the reviewers. When the researches were returned by the referees, almost half of them were rejected for publication. In spite of the incentives for faculty to do research, with annual grants amounting to PhP1.5 million, the overall quality has been less than desired.

Given the notion that a research work is an index of the university's research culture, there is an exigent need to examine the quality of researches produced by the faculty and students. A search for literature reveals that there has been no single study ever written that analyzed the evaluation results of peer reviewers' in the Philippines and abroad. This study, therefore, sets the trail for succeeding studies on external referees' evaluations. This area in research is extremely important considering that the referees represent the best minds in the field and whose research productivity has already been proven through the publication of their work. It is profitable to understand the reviewers' standards and perceptions of what constitutes a publishable research.

Objective of the Study

The study determined the quality of researches of the faculty along the substantive, methodological, and style aspects as evaluated by peer reviewers.

FRAMEWORK

The concept of peer review in research is within the purview of quality assurance defined by United Nations Educational, Scientific and Cultural Organization (UNESCO) as an embracing term referring to an ongoing, continuous process of evaluating (assessing, monitoring, guaranteeing, maintaining, and improving) the quality of a higher education system, institution, or program.

Quality assurance is a process through which a higher education institution guarantees to itself and its stakeholders that its teaching, learning, and other services consistently reach a standard of excellence. Therefore, quality assurance incorporates all the processes internal to the institution, whereby quality is evaluated, maintained, and improved (Duff et al. 2000 cited in the Primer for IQUAME). One of the indicators for A(r), which makes a school a research institution, is research capability. An institution should have a research program and a community of faculty, postgraduate students, and postdoctoral research workers that foster and support creative research and other scholarly activity.
An institution is judged by high level of research skills, a strong research culture, and a fully implemented research agenda supported by adequate resources and well-defined mechanisms to ensure publication and benchmarking. The research program results in excellent outcomes as shown by regular publication of faulty researches in ISI/refereed journal and a highly relevant research program. The institution demonstrates best practices that make the research community a model for others.

The types of articles published in ISI or other refereed journals are those that are deemed original and are of significant contributions to the research literature. A research article's contribution in the field/subfield has the following characteristics: (a) there is something in the research that other group of scholars will find interesting; (b) the contribution matches the research questions/problem; and (c) the contribution is very clear in terms of its relation to what the present literature is stating (Bernardo, 2006).

The Philippine Association of Institutions for Research, Inc. (PAIR) adapted for use by its member-institutions a refereeing form from the Research Unit of Davao Association of Colleges and Universities Network (DACUN). A publishable peer reviewed research must pass the three aspects: substantive, methodological, and style.

METHODLOGY

The study used the descriptive design involving the analysis of reviewers' judgments containing the quantitative and qualitative dimensions. The study utilized documentary analysis of reviewers' evaluation on the researches. The study involved 38 teachers from four colleges. Table 1 shows the distribution of faculty.

Table 1
Distribution of faculty researches by College

College	Faculty
Graduate Studies	24
Business Administration	4
Education	4
Arts and Sciences	6
Total	38

The instrument was adapted from the Research Unit of DACUN for use by the member-institutions of the PAIR. For this study, it was tested for reliability using Cronback Alpha with a coefficient of 0.8229 and with standardized item alpha of 0.9837 indicating high reliability. The content validity was established by the 26 referees who are research experts in their field. They considered the instrument as adequate to measure the quality of research for refereed publications. The referee's decision on the publication merits of a research takes the following options: (a) the paper is recommended for publication; (b) the paper is accepted but subject to minor amendments; (c) the paper is accepted but subject to major revisions; and (d) the paper is rejected.

RESULTS AND DISCUSSION

This section contains two parts: the quantitative and the qualitative evaluation

Evaluation of Faculty Researches. The overall quality is 3.29, which is satisfactory. The substantive aspects received satisfactory ratings for the introduction (2.88), discussion and conclusion (2.69), and content and scope (3.29). Also satisfactory were the methodological aspects (3.25), editorial (3.30), and writing style (3.01) under style aspect also obtained satisfactory ratings. Generally, the peer reviewers found the studies barely adequate to meet the requirements for publication. The introduction, discussion, and conclusion got the lowest ratings although satisfactory. The methodological aspects obtained the highest rating (3.25), followed by style (3.15), and last by substantive aspects (2.75). Table 2 illustrates the evaluation of the faculty researches.

The findings suggest that the faculty members have difficulties in the research conceptualization, particularly in justifying why the study was conducted utilizing the corresponding factual and literature support for the problem. In fact, the brief review of the pertinent literature was rated the least (2.60) among the indicators for introduction, indicating that the researches had limited theoretical background.

Table 2
Peer Reviewers' Evaluation of the Quality of Researches of the Faculty

	Graduate studies		Business Administration		Education		Arts and sciences		Overall	
	M	VD	M	VD	M	VD	M	VD	M	VD
A. Substantive aspect										
1. Introduction										
Exposition of the research problem	3.43	S	2.67	S	2.00	F	3.55	VS	2.91	S
Brief review of pertinent literature	2.43	F	2.50	S	2.00	F	3.45	S	2.60	S
Overview of the plan of study	3.36	S	2.67	S	3.00	S	3.55	VS	3.15	S
Presentation of the expected results	3.07	S	2.67	S	2.50	F	3.27	S	2.88	S
Mean	3.07	S	2.63	S	2.38	F	3.45	S	2.88	S
2. Discussion and conclusion										
Overview of the findings within the context of the problem and expected findings	3.21	S	3	S	2.50	F	3.73	VS	3.11	S
Presentation of supporting documents	2.71	S	3	S	2.50	F	3.73	VS	2.99	S
Interpretation of the results	2.93	S	2.83	S	2.00	F	3.45	S	2.80	S

Implications of the findings	2.93	S	3	S	2.00	F	3.56	VS	2.87	S
Demonstrates how the study helped resolve the original problem	3.00	S	3.17	S	2.50	F	3.73	VS	3.10	S
The data support the conclusion	2.92	S	2.83	S	2.50	F	3.45	S	2.93	S
The conclusion is within the boundaries of the findings	3.15	S	2.67	S	3.00	S	3.45	S	3.07	S
Mean	3.15	S	2.93	S	2.43	F	3.58	VS	2.69	S
B. Methodological aspect										
Fully defined design for making the research question operational	3.21	S	3.00	S	3.00	S	3.80	VS	3.25	S
Samples and sampling method and technique are fully described	3.14	S	2.50	F	3.50	S	3.00	S	3.04	S
Measures, instruments and or materials are reliable and valid	3.14	S	2.50	F	3.50	S	3.45	S	3.15	S
Statistical procedures are enough and are appropriately applied	3.50	S	3.00	S	4.00	VS	3.55	VS	3.51	VS
Mean	3.25	S	2.75	S	3.50	S	3.50	S	3.25	S
C. Style aspect										
1. Editorial style	M	VD	M	VD	M	VD	M	VD	M	VD
Titles, headings, illustrations, etc. are related to the text	3.21	S	2.67	S	3.00	S	3.27	S	3.04	S
Tables and or figures can stand without captions and portray information clearly	2.85	S	2.67	S	2.50	F	3.50	S	2.88	S
Format of references	2.92	S	2.50	F	5.00	E	2.82	S	3.31	S
Mean	2.95	S	2.61	S	4.33	VS	3.30	S	3.30	S
2. Writing style	M	VD	M	VD	M	VD	M	VD	M	VD
Abstract (length, accuracy, coherence, readability, content)	2.92	S	2.17	F	3.00	S	3.18	S	2.82	S
Length (balance in lengths among different sections)	3.21	S	3.00	S	2.50	F	3.09	S	2.95	S
Orderliness and flow in the expression of ideas	3.21	S	2.67	S	3.50	S	3.27	S	3.16	S
Precision and clarity in the choice of words (skillful communication)	3.21	S	2.83	S	3.00	S	3.55	VS	3.15	S
Mean	3.08	S	2.67	S	3.00	S	3.27	S	3.01	S
Overall mean	3.14	S	2.79	S	3.11	S	3.46	S	3.12	S
Ranking	2	4	3	1						

Interpretation Guide: 4.5-5.00 Excellent 3.51-4.50 Very Satisfactory 2.51-3.50 Satisfactory 1.51-2.50 Fair 1.0-1.50 Poor

In the discussion and conclusion, the interpretation of results obtained the lowest rating (2.80) along with implications of the findings (2.87), denoting that the analysis of the data lacked depth and connection to the literature and the actual conditions in the research site. The substance of the discussion has direct bearing on the conclusions of the study. The findings show that the data supporting the conclusion were limited (2.93).

In terms of content and scope, the contribution of the studies to the state of knowledge in the field got the lowest rating (3.29). This means that the main purpose of research, which is to generate new knowledge in support for instruction and extension, was accomplished to a limited extent. The theoretical bases of the studies were found to be weak. Hence, the validation and theory generation, which contribute to the body of literature, are constrained.

For the methodological aspects, the statistical procedures got very satisfactory rating (3.51), indicating that the faculty had appropriate statistical treatment of the data. On the other hand, samples and sampling method technique obtained the lowest rating (3.04). This finding implies that the faculty members were less circumspect in the description of the respondents or subjects of the study.

Along style aspects, the evaluation reveals that they paid least attention to the abstract (2.82) with respect to length, accuracy, coherence, readability, and content. The orderliness and flow of ideas (3.16) was satisfactory along with precision and clarity in the choice of words (3.01). Given their experience in technical writing, there remains a deficiency in their writing skills.

On the whole, the faculty members of the Arts and Sciences obtained the highest overall mean (3.46), however, satisfactory, followed by those in the Graduate Studies (3.14), the College of Education (3.11), and Business Administration (2.79). The vertical articulation of the advanced degrees of the Arts and Sciences faculty and their master's degrees (with thesis) partly explain their edge over the other faculty researchers in other colleges. The performance of the Business Administration faculty could be attributed to a limited research experience.

Researches by the faculty of Arts and Sciences obtained very satisfactory ratings for half of the 26 indicators. No other college came close to such ratings. In contrast, the researches of the faculty of the College of Education got "fair" rating for 11 out of 26 indicators (46%), denoting research deficiencies.

Peer Reviewers' Decision

Table 3 presents the rate of acceptance and rejection of researches as evaluated by the external referees. The acceptance rate of the faculty researches was 55 percent. The reasons cited by the reviewers for the rejection of researches include the *substantive aspect*: lack of compelling reasons for the conduct of the study that weakened the exposition of the research problem, lack of literature to support the problem, weak theoretical support, failure to connect the theory to the results, weak implications of the study, lack of connection between conclusions and findings, and unclear contribution of the study to the state of knowledge in the field; *methodological aspect*: unclear sampling procedures, weak reliability and validity procedures of the instrumentation process, inadequate statistical treatment; and *style aspect*: poor organization of ideas, deficient abstract, and inadequate documentation of sources.

Table 3
Peer Reviewers' Evaluation on the Quality of Faculty Researches for Publication

College	Accepted	%	Rejected	%	Total
Graduate Studies	11	46	13	54	24
Business Administration	3	75	1	25	4
Education	3	75	1	25	4
Arts and Sciences	4	66	2	34	6
Total	21	55	17	45	38

CONCLUSIONS

The mechanisms are in place for the development of a research culture. The strict refereeing process that yielded a high rejection rate is a sound mechanism that identifies researches with potential for utilization and publication in a refereed journal and ensures the integrity of the university's publications.

The quality of faculty research is satisfactory in the substantive, methodological, and style aspects as evaluated by peer reviewers from the Visayas and Mindanao. However, the qualitative evaluation reveals that the researches have deficiencies along conceptualization, analysis, and interpretation of data, indicating that the studies are barely adequate to meet the requirement for international refereed publication.

The acceptance rate of researches is 55 percent while the rejection rate is 45 percent, suggesting that 1 out of 2 researches by faculty members and students may be accepted by the referees. Faculty researches of the Arts and Sciences are better written than those of the Business Administration and Accountancy.

REFRERENCES

Arcelo, A. A. (2003). *In pursuit of continuing quality education through accreditation: The Philippine experience*. International Institute of Educational Planning.

Bernardo, Allan, B. (2006). *From thesis and dissertation to refereed journal publication: A conceptual and practical guide to transforming graduate research to journal article. Conference Paper*, Southwestern University, Cebu City.

Cagabhion, J. B. (2006). *Predictors of research performance of teachers in technical vocational schools of Biliran. Research and Educational Journal.*

Calmorin, L. P. (2000). *Educational measurement and evaluation*. Mandaluyong City, Philippines: National Bookstore.

CHED, Zonal Research. *Elements of the higher education research framework*. Retrieved from File//A\DLSU,Manila%20%Research%20 Centers.html

Fantini, R. P. (2000). *Regaining excellence in education*. Columbus, Ohio: Merrill Publishing Company.

Gulosino, C. (2000). Evaluating private higher education in the Philippines: The case for choice, equity and efficiency. *Occasional Paper,* (68).

Mohamad, S. S. (2005). *Physical plant and facilities in relation to the delivery of quality education at the MSU, Marawi City: A basis for policy and program proposals.* Doctoral Dissertation, Liceo de Cagayan University.

Primer on IQUAME. (2005). A guide to assessors. Commission on Higher Education. Republic of the Philippines.

Shaugnessy, J. J & Zeckmeister, E. B. (2000). *Research methods in Psychology*. New York: McGraw-Hill Book Company.

TO DO OR NO TO DO RESEARCH: AN EVALUATION OF THE CYCLE 1 RESEARCH INITIATIVE OF LA CONSOLACION COLLEGE BACOLOD

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ABSTRACT

Teachers, especially in higher education, are now more pushed to undertake and produce scientific studies whether or not the resources are available for research endeavors. La Consolacion College Bacolod, like many other higher education institutions, have also dreamed and hoped that their teachers will eventually go into research. A committee was created to formulate research policies. Part of the policies is the creation of research cycles consisting of four years per cycle.

The study sought to determine reasons why some teachers do research while others do not. A total of 33 fulltime college faculty participated in the study. It was revealed that teachers generally have a positive attitude towards research. They rated themselves *average* in terms of knowledge and skills while they rated their capacity to conduct research *difficult* but manageable with assistance. Inspite of their belief that research is a basic function, they generally feel that they are receiving low support from their department heads. The study concluded that research capability building can partially answer the problem of encouraging all college teachers to do research. It is strongly recommended that departmental administrators should support all the necessary trainings of their teachers.

Keywords: College faculty, research, research-capability building

INTRODUCTION

Background

Since the time of Plato's Academy, teaching and learning have been at the heart of higher education. Good teaching has not only been a source of cognitive development but also a crucial source of moral and intellectual inspiration for the newcomers into the academic community. In the context of developing countries, the importance of teaching and learning becomes even more significant, given the daunting challenges and shortcomings in other aspects of higher education such as limited material and human resources, issues of governance and management, and so on. In fact, it could be argued that whatever quality is found in these institutions is mainly due to the commitment of individual teachers and their gifted students.

One of the biggest challenges to the quality of higher education in developing countries is the absence, with a few notable exceptions, of a research culture. On one hand, this is linked to the availability of resources, particularly in scientific research. By its very nature, scientific research demands ongoing expenditure to create, sustain, and expand physical infrastructure like laboratories and libraries. Low and

middle income countries spend an average 3.3 percent of their GNP on higher education compared to 5.0 percent by high income countries. Translated into absolute monetary terms, the gap is enormous (ISMC, n.d.).

Whether or not the resources are available for research endeavors, teachers especially in higher education are now more pushed to undertake and produce a scientific study. Although research has always been linked or included as part of the duties and responsibilities of teachers, top level institution administrators in the past years have been lenient in exacting this output from their teaching personnel. At this time, however, the importance and the need for higher education institutions to undertake research cannot anymore be overemphasized. There are statements like the quality of higher education programs are determined by the research productivity of their faculty members (DeMeuse, 2003). Commission on Higher Education, accrediting agencies and award organizations related to the teaching profession are now including research as one of the criteria in evaluating the efficiency and productivity of an institution. Hence, top level administrators have to provide the structure, research policies, and program to ensure that their teachers conduct scientific studies.

La Consolacion College Bacolod (LCCB) like many other higher education institutions in the past years, have also just "dreamed" and "hoped" that their teachers will eventually go into research. It was not until 2003 when the Research Office was created to start actualizing the "dreaming" and the 'hoping' that teachers start doing scientific studies. A committee was created to formulate research policies. Over the years, these policies have undergone revisions but the main goal remains: All teachers have to do research. To promote the reforms of schools is to involve teachers in doing research in their classrooms (Sadro-Brown, n.d.).

The creation of research cycles consisting of four years per cycle is one of the clear-cut policies to guide teachers to conduct scientific studies. The first research cycle started in academic year 2004-2005 and has ended in 2007-2008. There were teachers who were able to undertake researches during their appointed years while other teachers have not at all conducted a study within the first cycle despite several verbal and written reminders. Why? What is it that really holds back a teacher from undertaking a research? But if some can do research, then why some cannot. Is it the capacity to do research or the attitude that separates the researchers from the nonresearchers? What are the teachers' difficulties which may be addressed by the Research Office or the Institution? In what other ways can the school's research climate be developed? These are just some of the questions posed in this research.

Objectives of the Study

This study was undertaken to determine why some teachers do while others do not undertake research. Specifically, it aimed to answer the following objectives:

1. To decide the researchers' and nonresearchers' perceived ratings of their capabilities in terms of knowledge and skills to undertake research; assessment of their attitude and motivation to do research; and assessment the support and services provided for by the Institutional Administrators, Departmental Administrators, and the Research Office; and

2. Is there a significant difference in the way the researchers and the nonresearchers rate their capabilities in terms of knowledge and skills to undertake research; assess their attitude and motivation to do research; and assess the support and services provided for by the Institutional Administrators, Departmental Administrators and the Research Office when grouped according to Departments and when taken as a whole.

CONCEPTUAL FRAMEWORK

Aside from teaching, one of the duties and responsibilities of higher education teachers is to produce researches (UNESCO, n.d.). As this time, there is no backing out from the responsibility to do research. Teachers simply have to undertake a scientific study. The only question remains to be answered for administrators is how to help those teachers who do not want to do research. The ultimate goal is to help teachers undertake research so that LCCB can be classified as a teaching-research institution.

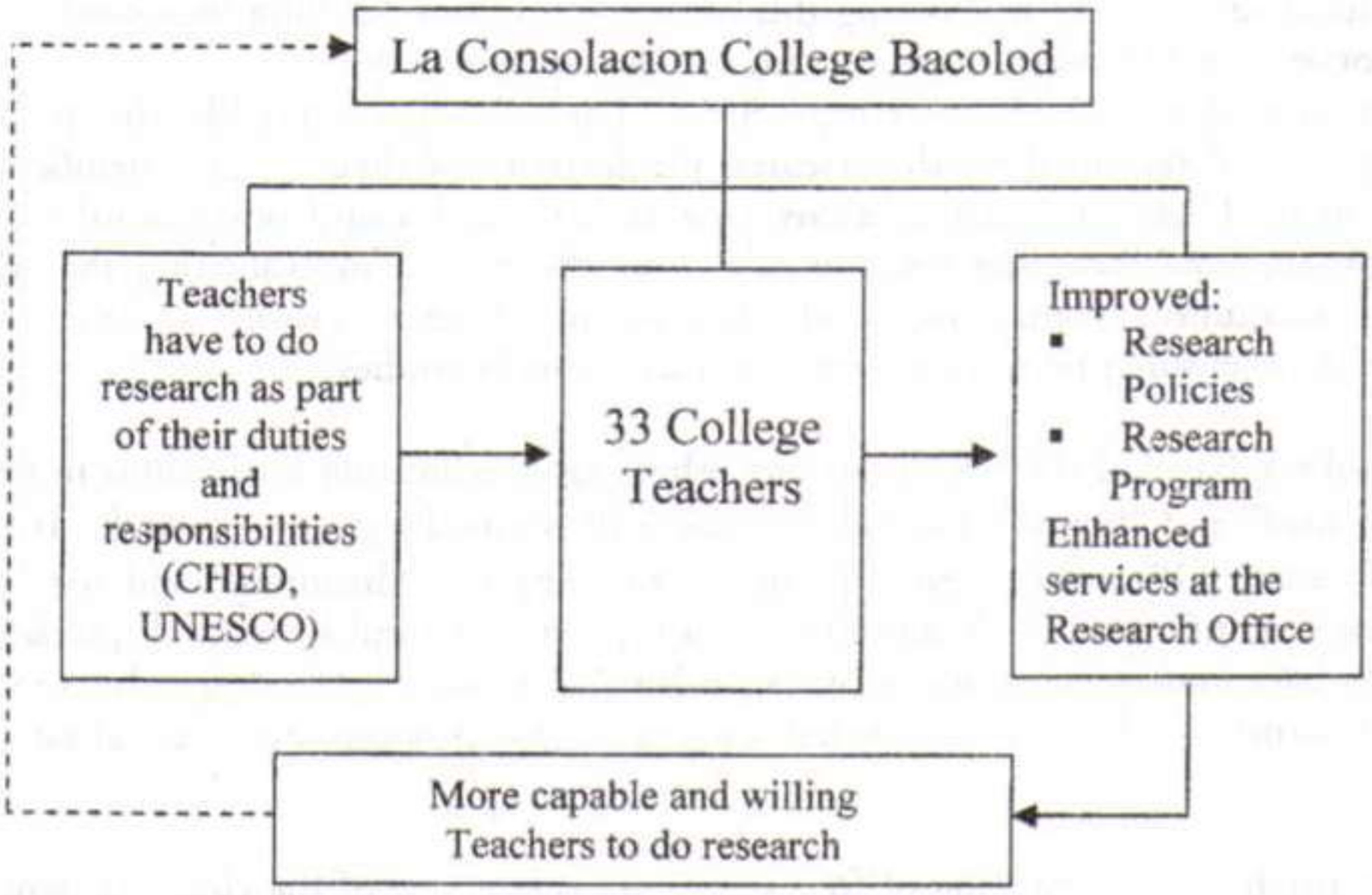


Figure 1. Schematic Diagram

METHODOLOGY

Locale of the Study

The study took place at LCCB located in the heart of Bacolod City which is one of the member-schools of the Association of Schools of the Augustinian Sisters (ASAS) managed by the Augustinian Sisters of our Lady of Consolacion (ASOLC) congregation.

Research Design

The descriptive type of research was employed due to the nature of the research being undertaken where there is a need to study the condition or relationship which exists (Good & Scates, 1999).

Respondents of the Study

The respondents of the study were 33 fulltime teachers who came from the four schools of the college department:

Table 1
Distribution of Respondents

School	Frequency
School of Liberal Arts and Education	13
School of Business and Information Technology	3
School of Architecture, Fine Arts and Interior Design	3
School of Hospitality and Tourism Management	14
Total	33

Data Gathering Instrument

The instrument was self-made which listed all possible reasons and obstacles as to why teacher a teacher may not be able to undertake a scientific study, based on personal experience, observation and feedback from the teachers themselves.

Validity and Reliability

The self-made questionnaire was subjected to a content-related evidence of validity. Five administrators and teachers from the Graduate School of LCCB gave their suggestions with regard to the content and the format of the instrument. Using the criteria developed by Good and Scates (n.d.), the experts rated the instrument with a mean score of 4.20 interpreted as very good. Likewise, Cronbach's Alpha was utilized to determine the reliability of the instrument. The result was .975, interpreted as very reliable.

Data Gathering Procedure

The instrument was distributed to the teachers during their department year-end evaluation meetings.

Data Analysis

Problem 1 basically utilized the mean while the motivation for doing research and the reasons why teachers were not able to research were ranked. *t*-test was used to determine any significant difference in the responses of the teachers when grouped according to departments.

RESULTS

In general, college teachers rated themselves *average* in terms of knowledge and skills to conduct researchers while they rated their capacity to conduct research *difficult* but manageable with assistance. By and large, teachers have a positive attitude towards research. These findings drew parallelism in a 2004 study among curriculum leaders in Hong Kong who generally perceived themselves having ability to do research and valued research for professional development (Hui, 2004). The services of the school's Research Office (RO) were considered by the teachers to be very helpful, with the Office providing them high support.

The teachers in the School of Architecture, Fine Arts, and Interior Design (SARFAID), School of Business and Information Technology (SBIT) and School of Hospitality and Tourism Management (SHTM) all rated their knowledge and skills to conduct research *average* while the School of Liberal Arts and Education (SLAE) rated their knowledge and skills to conduct research *above average*. In general, college teachers rated themselves *average* in terms of knowledge and skills to conduct research.

In assessing their knowledge, skills and difficulty in conducting research, there was not much difference in the way teachers from different departments assessed themselves. As for the attitude of the teachers with regard to research, results show that there was no significant difference in the way teachers found research as an important function and activity in an educational institution.

The top reasons that motivated teachers to do research included self-fulfillment, professional growth, requirement by administrators, financial incentives, and challenge to one's self. Teachers are primarily motivated by intrinsic rewards such as self-respect, responsibility, and a sense of accomplishment. Thus, administrators can boost morale and motivate teachers to excel by means of participatory governance, in-service education, and systematic, supportive evaluation (Ellis, 1984). The top factors that thwarted teachers to do research included time-constraint, lack of equipment and Internet accessibility, having several subject preparations, lack of support from administrators, and insufficiency of research incentives. With regards to the support being given by institutional administrators, the teachers were consistent in their rating. There was no significant difference ($p > .05$) in the rating of teachers between departments. Out of four departments, teachers in two departments rated *highly* the support given to them by their

departmental administrators while teachers from two other departments rated the support of their departmental administrators *low*. Hence, there was significant difference in the way teachers perceived the support being given to them by their departmental administrators.

CONCLUSIONS AND RECOMMENDATIONS

The study highlighted the teachers' capacity to do scientific research undertakings given all the necessary training and support by the school's Research Office and their respective departmental administrators. Both intrinsic and extrinsic motivations and barriers strongly influenced a teacher's attitude towards research.

The continued training to enhance teacher's research capabilities has been deemed to be the primary need. The redirection of the research policies to something that is encouraging and uplifting, rather than threatening and demoralizing for the teachers, must also be considered. Departmental administrators like the deans and the program heads are also advised to look into the possibility of "deloading" their teachers should they express willingness to do research along with the introduction of a viable research incentive program.

The first research cycle has produced 93 researches based on the following levels: Level 1 (Unit/Office/Departmental) – 55; Level 2 (Institutional) – 26; Level 3 (City/Municipality) – 6; Level 4 (Provincial) – 5; and Level 5 (Regional) – 1. There were a total of 81 researchers during this cycle. The conduct and implementation of future research cycles can still be improved. Hence, the following are the recommendations of the researchers:

1. Ninety-eight percent (98%) of all researches done during the first cycle were quantitative. There should be more training and assistance to encourage teachers to venture into qualitative research;
2. Changing of the format of the research from traditional to publishable;
3. The Research Office can continue to receive research proposals at any level. However, to uplift the quality of researches, an external panel will be invited to screen and approve the proposals. The panel may, likewise, recommend for the deloading of a teacher equivalent to 1 or 2 subjects based on the scope and coverage of his/her proposal;
4. Administrators should have a research output related to their area of responsibility within their appointment (2 years) period as part of their task; and
5. An additional budget should be provided to encourage teachers to present their researches locally, nationally, or internationally.

REFERENCES

DeMeuse. (2003). Letter from the special editor conducting research. *Information Technology, Learning and Performance Journal, 21*(1).

Ellis, T. I. (1984). Motivating teachers for excellence. ERIC clearinghouse on educational management. *ERIC Digest, Number 6* .

Hui, S. K. (2004). *Attitudes towards research: The case of curriculum leaders in Hong Kong.* Department of Curriculum and Instruction, The Hong Kong Institute of Education, Hong Kong.

Institute for the Study of Muslim Civilisations (ISMC). (n.d.). *Conference on higher education.* Retrieved October 9, 2007, from http://www.aku.edu/news/seminars/hede/confabs.htm

Sardo-Brown, D. (n.d.). *Questia Journal Article.* Retrieved July 12, 2010, from http://tinyurl.com/2fokcm3

United Nations Educational, Scientific and Cultural Organization (UNESCO). (n.d.). *Status of higher education teaching personnel.* Retrieved October 9, 2007, from http://portal.unesco.org/enev.php.

SEAAIR
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DASMARIÑAS

ENHANCING THE RESEARCH CAPABILITIES OF HIGHER EDUCATION INSTITUTIONS: THE BUKIDNON STATE UNIVERSITY INITIATIVES

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ASBTRACT

Bukidnon State University (BSU), as a premier institution of higher learning in teacher education, sciences, and humanities, is anchored on the mission to develop competitive professionals who are committed to build a sustainable life for all through quality instruction, research, extension, and production. With this mission, the university took the initiative to develop professionals and make them transmitters of knowledge contributing to the university's development and to the community, as well. A series of research capability development programs together with incentive mechanisms, were implemented. These enhance the faculty and motivate them to further their education with respect to statistics and research. Issues and challenges identified were: (a) researches that are limited and confined only within the parameters of the workplace; (b) a need for more in-depth researches utilizing data mining as a tool; and (c)more aggressive collaboration efforts among the faculty, funding institutions and partners. The programs motivated and enhanced researchers' skills in statistics that are useful to their research endeavors. Initial results revealed that the initiatives introduced, created a community of researchers which enhanced the research culture in the university.

Keywords: Research capabilities, purposive capability building

INTRODUCTION

Higher education institutions (HEIs) have three relevant and interconnected functions, namely: instruction, research, and extension. Of these three functions, the Commission on Higher Education (CHED) underscored the importance of research in the national policy. In 1998, CHED published the National Higher Education Research Agenda-1 (NHERA-1) whose explicit objectives is to respond to three major areas of concern, namely: (a) increasing research productivity and establishing a culture of research by capacitating and empowering individual academics in Philippine HEIs; (b) commissioning reputable higher education individuals or groups of individuals to conduct researches which will become bases for higher education policies (commissioning); and (c) decentralizing the level of administrative operations for higher education research in order to make the logistical support for research more accessible to researchers in various regions of the country (Alcala et al., 2009). As a result, HEIs find ways to integrate research in their respective institutions (Bernardo et al., 2006).

In the academe, it is the primary goal of Philippine HEIs specifically the Higher Education Research (HER) component to take part in the crucial function of enhancing research culture. HER can address specific problems in industry, business, government and the community with the academics acting as problem solvers. It can contribute to the formulation of policies, the adoption of strategies, the

development of programs, and the decision making at different levels, in different sectors. It is carried out by capable and creative people and disseminated properly to ensure timely use and application HER will contribute significantly to national development (de la Pena, 2007).

Ordonez (2006) stressed the impact of education research on policy and decision-making based on four ideas, namely: (a) there is a greater need than ever to undertake university research collaboratively, rather than individually; (b) the determination of a university research agenda is becoming more policy maker driven and less researcher or institution driven; (c) university research must detach itself from single discipline focus, to involve systematic and inter-disciplinary perspective; and (d) university research must focus on effectiveness issues rather than efficiency.

Locally, Bukidnon State University sprang from its humble beginnings in 1924 as Bukidnon Provincial High School. It started as a two-year high school offering normal courses to prepare teachers to teach in the elementary. At that time, it was one of the seven provincial high schools in the country that offered teacher training courses. It has undergone several transformations from a provincial high school to what it is today after more than eight decades of existence. On June 14, 1976, Presidential Decree 944 converted Bukidnon Normal School into a state college, offering 4-year degree programs in arts and sciences, commerce, and teacher education which is its flagship. Prior to its conversion, there were already emerging knowledge-based surveys from among the senior faculty, which when scientifically processed and recorded, could serve as authentic documents of research. The installation of another president in 1986 opened a new era of metamorphosis in terms of academic direction, growth and development for the academe, the students, and the personnel. This was brought about by the creation of several units and schools as approved by the Board of Trustees. One of these is the Research and Development Unit manned by a faculty, without formal designation. Research agenda and directions were not adequately defined, hence, faculty members' initiative in conducting research was not thoroughly synergized. With Bukidnon State College's conversion to a university on May 15, 2007 (RA 9456), Bukidnon State University strengthened its research unit and the capability of its faculty. There is a felt need to conduct more relevant and useful researches which could generate beneficial effort, not only in the region it serves, but also in the global arena. Quality assurance demands that research should permeate the professional activities in the academe (Bukidnon State University Manual of Operations, 2008).

The framework used in the study is the Input-Process-Output Model (IPO). In the IPO model, a process is viewed as a series of boxes (processing elements) connected by inputs and outputs. The inputs are the research issues. The process is the initiatives done to address the issues. The output is the enhanced research capabilities which can be manifested in the research performance as indicators. Figure 1 illustrates the IPO model.

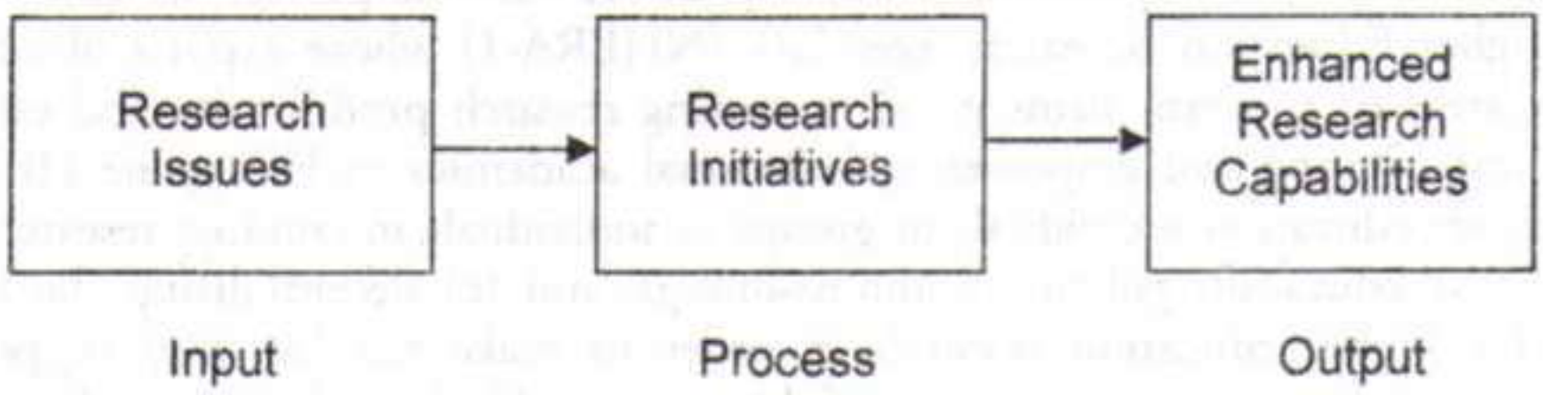


Figure 1. Input-Process-Output Model

Experiences and initiatives on how research capabilities were enhanced at Bukidnon State University, and how these initiatives were translated into policy recommendations were identified. Consequently, this paper examines the initial results of research trainings conducted geared towards the research productivity, and the enhancement the research culture of the institution.

RESEARCH ISSUES IN THE UNIVERSITY

In the past, research among the faculty at Bukidnon State University is wanting and seemingly not attractive. Only seven percent of the regular faculty members are conducting research. Some issues were identified based on the experiences of faculty, and these include: (a) financial assistance and funding, (b) teaching load of faculty, and (c) capability building and its sustainability.

Limited financial assistance and funding. Research funding were limited and inadequate. Incentives for research was lacking or even missing especially for: (a) faculty conducting research; (b) faculty disseminating finished researches in the national and international forums; (c) research publication; and (d) financial assistance for travels especially for international presentation and dissemination.

Preference on teaching overload over research overload. The issue of faculty with associate professor and professor level to conduct research instead of teaching overload was not well emphasized. Professors prefer to have their overloads in instruction rather than research because of the rigorous nature of research than that of teaching. Aside from the fact that they were less remunerated when they engage in research.

Need for capability building and its sustainability. In 2008, before the first capacity training, out of the 30 faculty respondents, 47 percent revealed that they lack confidence to do research due to limited knowledge in statistics and identification of research problems. There were 23 percent who had no experience in the preparation and submission of research proposal; 17percent considered research as an intellectual exercise for professor level only; 83 percent have limited knowledge and training, particularly on differentiating exploratory data analysis from confirmatory data analysis. One interesting issue raised was the challenge to encapsulate the real essence of "research culture" to the students, especially on research ethics and the love of doing research as a way of life (Mirasol, 2010). The sustainability of training was also an issue.

INITIATIVES

Based on the issues raised, providing knowledge when and where it is needed is a challenge for the Research and Development Unit of the university, hence, the formulation of the purposive research capability building among faculty members. The unit at present, together with the research council, continues to nurture and sustain the research culture through this endeavor. Research training is the core of enhancing research and promoting research within HEIs (Calma, n.d.). The intention is to create a research community in the university. The initiatives undertaken were on the following aspects: (a) financial assistance and funding, (b) teaching load of faculty, and (c) purposive capability building and its sustainability.

On financial assistance and funding. The university pioneered in the area of fiscal autonomy by generating sufficient income to support the university's programs and projects. *In* 2008, the Board of Regents approved a university research manual of operations defining, among others, research policies and mechanisms to increase budgetary allocation for research, researchers' incentives, and honoraria. Likewise, research thrusts and priorities were clearly defined to serve as guide in the conduct of researches. In 2009, five percent of the university's total income was allocated for research endeavors. This year, the said allocation has been increased to 10 percent which amounted to PhP5.5 million.

On teaching load of faculty. Table 1 shows that in the professorial and associate professorial levels, only 91 percent and 42 percent, respectively are involved in research. With the on-going research on the development of an equivalency formula for actual teaching load and actual research load, the result will hopefully entice researchers to opt for a research overload, thus increasing the research productivity.

Table 1
Professors and Associate Professors Engaged in Research

Rank	Professor		Associate professor	
	Number of professors	Numbers of professors engaged in research	Number of associate professors	Number of associate professors engaged in research
I	2	1	5	2
II	2	2	3	1
III	-	-	5	3
IV	2	2	3	3
V	1	-	15	5
VI	6	6	-	-
Total	11	10	31	13

On purposive capability building and its sustainability. The university introduced several innovations in Higher Education, particularly in the area of research such as the formation of the University's Core Research Faculty and the formulation of the Purposive Faculty Research Capability Building of the University. To enhance the research capacity of the faculty and promote sustainability of the research agenda of the university, a series of research capability building was conducted. These intervention capability trainings were evaluated as to how the faculty are strengthened and enhanced in the conduct of their research.

Training needs assessments were given to the 30 faculty members of varied specializations which were selected and trained on research and statistics. These trainings were on basic data analysis, confirmatory data analysis, exploratory data analysis and data mining, theory development and scientific writing. The capability building started in 2008 and the last training was conducted in May 2010. The trainings were integrated with the use of an information communication technology (ICT) using a software and computer hands-on. The topics started from the basic statistics and research up to the scientific writing. It was noted that new techniques in research such as data mining and theory development were introduced for the first time and first in the region. As an innovative strategy to generate research proposals, all the trainings were output-based. The participants were required to generate research proposals and present the same at the end of the training after being critique by experts. Winning proposals were considered for funding by the university. Several faculty members were now by neighboring HEIs to serve as peer reviewers or evaluators, especially on researches that use data mining as a tool.

The sustainability of the trainings became an issue. To address such, a research group was organized among the trained faculty. The research group meets once a month to keep abreast with the new trends in research and strategies through sharing. Guided by a research consultant, they shall continuously generate research proposals for possible funding by the university and other local support institutions. Research centers headed by a project leader were organized from the research group to implement the university's research thrusts and priorities. The centers include education and advocacy, socioeconomic-political-health, science and environment, and governance. A research program on climate change was formulated with four dimensions/centers. In the process, senior researchers were mentoring the juniors.

INITIAL RESULTS

Data gathered for the last six years (2004-2009) including the first quarter of 2010 revealed a remarkable change in the indicators as shown in Table 2. It can be noted that there was an increase in the number of

faculty researchers to 48 percent. Likewise majority of the performance indicators increased after the intervention in 2008. In fact in 2008, 10 out of 22 research proposals were products of the trainings.

The increase can be attributed to trainings conducted and mentoring that increased confidence and skills among faculty members to do research. Recognizing the importance of disseminating a research results, there was, likewise, an increase in number of dissemination not only in the local, national, but international foruins as well. Financial and administrative supports were very essential in ensuring improvements and in promoting the research culture.

In summary, significant outcomes were noted after the initial results viz: (a) collaborative researches through mentoring increased the interest of junior researchers to do research; (b) dissemination of research results in national and international forums; (c) established linkages and partnership with other research institutions;(d) formulated research programs and established centers namely: education and advocacy, socioeconomic and health, science, and governance; (e) increase in research budget; (f) membership to research consortia; and (g) policies and direction defined.

Table 2
Bukidnon State University performance from 2004-2009

Indicator	Year						
	2004	2005	2006	2007	2008	2009	2010
Number of faculty researchers	21	22	21	16	50	68	70
Number of research proposals	9	9	7	9	22	19	20
Number of published researches in refereed journals	12	10	10	10	11	2 12*	1 2*
Number of disseminated researches in forums/ conferences:							
Local	12	10	10	10	12	22	2
National	1	2	-	-	5	5	18
International	-	-	-	2	5	9	5
Number of collaborative researches	9	8	6	6	20	15	5
Number of capability trainings and in-house review	2	3	2	3	5	2	1
Number of awards given to faculty:							
Local	-	-	-	-	-	-	2
Regional	-	-	-	-	1	1	-
National	-	-	-	-	-	1	-
International	-	-	-	-	-	-	3
Number of research program	-	-	-	-	-	1	1
Institutional membership to research consortia	1				1	2	

Source: Research and Development Office
* in press for publication

CHALLENGES

1. Establishment of mechanisms that will sustain research program despite possible change of administration.
2. Mechanism that will institute a multiplier effect among faculty members who were not training participants.
3. There is a need to increase publication to national and international refereed journals.

POLICY RECOMMENDATIONS

1. Mainstream faculty research capability building to the university's faculty capacity development program.
2. Make mandatory for the associate professors and professors to conduct researches, disseminate and publish these to refereed journals.
3. Do encourage and promote faculty research productivity at Bukidnon State University, and develop an equivalency formula for actual teaching load and actual research load. The formula could allow the faculty of the university to choose between a research overload or a teaching overload per term. Realizing the complex nature of a research task, a research overload for the faculty should have better incentives.

REFERENCES

Alcala, A., Padua, R. N., &.Lachica, O. D. (2009). Evaluation of the National Higher Education Research Agenda-1: 1997-2008 and NHERA-2 Responses. Retrieved June 15, 2010, from Ched-zrc.dlsu.edu.ph/evaluation-of-the-national-higher-education-research-agenda. ppt

Bernardo, A. B., Munoz, M. P., & Valencia, M. N. (eds.) (2006). Research and higher education development: Asia-Pacific perspectives. De la Salle University Press, Manila, Philippines.

Bukidnon State University Research Manual of Operations (2008). ISSN 2094-0289.

Calma, A. (n.d.). Research training in the Philippines: Exploring the issues for a nation striving to enhance research quality. Retrieved May 12, 2010, from http://www.Cshe.unimelb.edu.au/teaching_learoing/ConferencePaper2.pdf

De la Pena. (2007). Enhancing research culture in Philippine Higher Education Institutions. A paper presented during the 42nd *Annual Assembly of the Philippine Association for Graduate Education.*

Mirasol, J. M. (2010). Statistical human resource development: The case of Bukidnon State University, Philippines. *PHILARM Journal of the Philippine Association of Research Managers, Inc., 7*(1).

Ordonez, V. (2006). Changing vision and mission of higher education research. *Research and higher education development: Asia-Pacific perspectives* (eds. Bernardo, A. et al.). De La Salle University Press, Manila, Philippines.

PATTERN AND APPROACHES TO ACTION RESEARCH OF EDUCATION STUDENTS

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ABSTRACT

This study analyzed the Pangasinan State University BSE and BEE students approach to action research during School Year 2001-2007; determined the trend/pattern of action research; established commonalities; identified the research gap; and identified the priority of researches. Complete enumeration of respondents was employed using Quizzes, checklist, and observation guide are common instruments.

The descriptive-qualitative method of research was used to investigate the approaches/trends of action researches. Systematic analysis dealt with specific criteria in three major components: content, process, and output. There were 187 numbered action researches analyzed and evaluated. Simple measures of central tendencies were employed to treat the data. Finally, identified research gap on focus, research design and methodology was wide and evident.

The Education students should focus more on topics identified as research gap such as to measure the impact of a teaching method, procedure, or material on the discipline of the child. Paradigm shift on action research design should deal with repeated experiments rather than evaluation or survey. Priority action researches about lesson delivery/presentation, motivation technique; work environment that strikes creativity among student/pupils should be encouraged. Institutional research agenda should also include action researches on the development of techniques, tools, modules, kit, models, and systems.

Keywords: Action research, descriptive-qualitative method of research, Education students

INTRODUCTION

Since time immemorial, the amount of time and efforts spent for research in education all over the world is tremendous. This is coupled with unquantifiable amount of money and other essential resources from the budget. But what is the percentage of applicability of these studies conducted? If the studies conducted are to remedy the problems of education, then students are to learn more.

According to Kemmis (1985), action research purpose of solving problems does not contribute to science. However, it improves the school and teacher practice. It is focused on several try out of several techniques and immediate applications, not on the development of theories. The results usually yield practical results which could be immediately applied in the classroom by teachers or mentors.

The College of Teacher Education teaches research to their students. If research is really a practice to solve existing problems in the classroom or education, then what kind of approach are they going to use? Are

the studies really an answer to the problems of education or just to comply with the requirements for graduation? Is conventional research like thesis a very scholarly and technically written output appropriate for action research? Are the studies too vague to address small classroom problems? Are the education students properly oriented to observe and decide on the problems to solve?

Teachers and researchers hope to meet the needs and demands of modern education. They want to try out new practices or methods that will give better promise to education, and improve classroom situation. In other words, education students conduct of action research during their practice teaching is a ground for practice on how to solve problems in the classroom.

Obviously, educators and researchers would not like to put these efforts and money to waste. To this effect this study (a) analyzed the BSE and BEE students approach to action research during school year 2002-2008; (b) determined the trend of problems identified in the classroom; (c) established commonalities; (d) identified the research gaps from the studies; and (e) identified priorities for research agenda in the CTE program.

METHODOLOGY

The descriptive-qualitative method of research was used to investigate the approaches and trends of Education Students (BSE and BEE) action researches conducted during School Year 2002-2008. However, there was no action research conducted for the School Year 2004-2005 since undergraduate thesis was required for graduation. The study employed content analysis in data examination and formulated inferences from objectively identified characteristics of records and documents (Holsti, 1986). In a systematic analysis, the content is analyzed using specific criteria formulated for such purpose.

This study used the instrument formulated by the University Research Council as framework in the analysis and evaluation of the BSE and BEE action researches. The criteria have three major components, namely: content, process, and output. This was also used as the criteria to analyze action research process. Some excerpts from the students' action researches were written to describe the quality of their studies. There were 187 completed BSE and BEE action researches analyzed and evaluated. They were properly numbered as case study 1 to 187.

RESULTS AND DISCCUSSION

There were three elements evaluated in the patterns and approaches to action research the (a) content, (b) process, and (c) out put.

On Content

There were three areas on content that were used in the analysis and evaluation of studies. These were the subject matter or problem of the study, significance of the study and review of related literature and studies.

The reviewed actions researches showed that majority of the studies are properly titled, while 30 percent action researches were improperly titled. The vague titles include the words like "*Study of Reading, Comparative study of methods of Teaching in Language, Analytical, Evaluation of a Method... , The Implications of a study... , and Descriptive study of Behavior*, and *Bases for development* were written in the title. Other titles were not coherent with the content of the discussions. Ten studies were found to have content discussions which were not the variables of the title. Sample action research number 54 stated

the title as; *Study of Problems Encountered in Reading and Spelling.* The title itself was not specific. The review of the text discussed the problems about behavior of pupils while there was no process mentioned to solve the problem observed, but it was a matter of enumerating the difficulties.

Table 1 presents the subject matter of the action researches categorized into common subject areas. It shows that 21 percent, 16 percent, and 14 percent of the action researches dealt with classroom discipline, factors affecting performance, study habits, behavior, motivation, and participation. Difficulties in the subject areas (13%), and methods of teaching (12%) were some of the identified problem areas. The three top most subject matters or problems of action researches among student teachers concern with students'/pupils' discipline, behavior, interest, and motivations. These are the students'/pupils centered problems. Other problems concerned with difficulties of their pupils in learning Math and English and improvement of teaching methods. Least of their concerns were topics about use of visual aids/equipment, conduct of test/quiz, and its type.

The results of the study were also the concern of undergraduate theses of BSE and BEEd. The common problems were about student behavior, discipline, study habits, motivation, and participation (Pambid, 2006). These problems need immediate intervention. Guidance counselors and parents must be aware that the pressing need of education is students/pupils' discipline and behavior. The content focus of action researches were on discipline, behavior, study habits, and motivation while the research gap on content dealt with the use of visual aids and equipment, type of test or practice sets and its conduct

Table 1
Subject Matter of the Action Researches

No.	Subject matter	Frequency	%
1	Classroom discipline and behavioral problems.	40	21
2	Factors affecting low quiz performance and study habits.	29	16
3	Problems in participation, recitation and motivation.	26	14
4	Difficulties encountered by pupils in math, reading, communication, and spelling	24	13
5	Improving methods of teaching.	22	12
6	Improving pupils spelling, vocabulary, reading and pronunciation.	12	6
7	Problems met by student teachers in teaching different subjects.	10	5
8	Students lack of interest in the subject and inattentiveness.	9	5
9	Teaching with the use of visual aids, other facilities and equipment.	8	4
10	Type of tests, practice sets and the conduct of the test.	7	4
	Total	187	100

The significance of the studies among 74 percent of action researches can be described as practical. The expected results of the study were sensible and realistic in serving the target client such as the students/pupils, teachers, and administrators. On the other hand, 16 percent of the studies did not have clear significance of the study. To some studies (10%) the significance were not mentioned because the papers were just the compilation of copied articles from the books and journals.

About 83 percent of the researches do not have well-organized review of related literature and studies nor basis in their discussions. Though it was mentioned by Kemmis (1985) that an action research may not have related literature, a simple study could be substantial if it will have its bases in order to come up with a supporting theory. Some of the remaining researches (17%) with related literature were stereotyped since the lines were lifted directly from a source without coherence within the study. Seventeen percent action researches did not establish relationship of the past studies to the present. Those with related literature and studies were presented in their introduction and no synthesis in their discussions.

Process

Action research should be simple and classroom-based study. It starts with one problem in the classroom which is not too long. The review of related literature is not extensive. However, the hypothesis is needed because it is usually experimental. Sometimes the problem is the hypothesis itself. According to (Zulueta, 2005) a problem that is clearly stated suggests the hypothesis.

The procedures in the action research are very specific in step by step process. Action research is a dynamic process in which the following aspects are to be understood: (a) planning, (b) acting, (c) observing, and (d) reflecting. After analyzing the data and reflecting on the results, the researcher can revise the procedure plan, act, observe and reflect until such time a suitable solution to the problem is attained. Thus, an action research has a spiral procedure and the conclusions and recommendations are applicable to a specific class. The process refers to the analysis, methodologies and procedures employed in the conduct of the study. The different components of research process evaluated are research design, sampling technique, instruments, and statistics used and procedure in gathering data. Table 2 shows the action research process used by the student teachers.

Table 2
Research Methodology

Variables	Frequency	%
A. Research Design		
Descriptive	178	95
Normative Survey	104	56
Case study	3	1.5
Correlational	1	0.5
Evaluation	68	36
Comparative	2	1
Experimental		
True-Experimental	9	5
Total	187	100
B. Sampling & Respondents/Samples		
Complete Enumeration	138	74
C. Instruments used		
Questionnaire	45	24
Interview Schedule	5	3
Rating scale	4	2
Checklist/Observation	55	29
Attitude scale	3	2
Test/Quiz	26	14

Research design.

The results reveal that majority (95%) of the researches used descriptive design while only 5 percent used the true experimental design. Ninety five percent of the action researches described and evaluated the behavior/discipline, difficulties, problems of their pupils/students and practices of the student teachers but there were very few solutions conducted to solve the problem(s) identified.

Samples.

It was noted that the respondents were the pupils/students and student teachers.

Instruments. There were 138 (74%) researches with complete and clear instruments used. The common instruments used were checklist/observation (29%), questionnaire (24%), and test/quiz (14%). This

implies that the types of instruments used in the action research were suitable for survey and evaluation design. There were no noticeable combinations of instruments used to have its synergistic effect. The questionnaire as used by 24 percent of the studies showed no signs of pilot testing to establish validity and no content analysis of the test were undertaken nor mentioned.

Treatment of the data.

The 74 percent action researches, with clear cut samples and instruments, were the studies evaluated for the statistical treatment. Majority of the researches used frequency and mean while two used *t*-test and one used Pearson *r*. Out of nine true experimental research designed studies, six, used only descriptive statistics. This indicates wide research gap on design, instruments, and statistical treatment of the data.

Data analysis/interpretation.

Data analysis and interpretation is the meat of any study. It becomes explicit and significant if the interpretation goes beyond the reading of the table and the words, figures and numbers are extrapolated for the implications of the data analyzed. On the other hand, data analysis is phony and superficial if it is just textual version of the data and figures without significant inference made. Data analysis was evaluated whether it is exhaustive and in-depth or textual with no reference.

It was found out that 89 percent used basic descriptive statistics such as frequency and mean to explain the data. Only one of the study used Pearson *r* and two used *t*-test to explain the relationship and difference in mean. Eighty nine percent action researches have table reading and no in-depth data analysis, interpretation or implication. Nine percent of action researches having superficial interpretation with no reference at all. However, only two percent researches have exhaustive data analysis and interpretation.

Majority of the 4th year education: (a) were not well exposed to reading research journals or theses; (b) are not familiar with action research method; (c) had observation outputs with interpretations that rely only with books or sometimes are copied or lifted from books; (d) have no citation in their action researches through they have lifted words or phrases from an author; (e) do not know fully well the difference between a term paper from an action research; and (f) do not know how to make in-depth interpretations and implications. These were some observed facts that contributed to students' faulty data analysis and interpretations. Findings a, d, e, and f are similar to the findings of Pambid (2006) and Miclat (2006) with regard to data analysis and interpretations of theses and dissertations.

Output

The output looked into the findings, conclusions, recommendations, and research implications. The findings, conclusions, and recommendations were examined in terms of whether the findings have corresponding basis for the conclusions. The conclusions drawn were based from the findings and the recommendations were based from the conclusions (Pambid, 2006). The conclusions were responses to the problem in the classroom being identified, otherwise, the results are faulty and spurious.

Table 3 presents the output data of action researches conducted. It is evident that majority (88%) of the studies have faulty/spurious findings. Some researches have data which are copied from previous studies conducted. Only 12 percent have logical findings which usually dealt with tests as instrument. Majority of the findings were observed enumeration of difficulties and problems without any basis to the problem. The enumerated objectives or problems were sometimes not relevant in the study.

Table 3
Output of the Evaluated Action Researches

Variables	Frequency	%
A. Findings		
Facuty/Spurious	164	88
Logical	23	12
B. Conclusion		
Faulty (not an excerpt from the study)	164	88
Logical	23	12
C. Recommendations		
Faulty	79	42
Based conclusion	15	8
Off Tangent	93	50
D. Result/Implication		
Clear implication in classroom management (student behavior & motivation,) and teaching methods.	23	12

Twelve percent of the studies have conclusions that were logical while majority (88%) of them were faulty. Most of the conclusions were not excerpts from the study. Oftentimes the conclusions were not answers to the problems identified in the classroom. There were sweeping statements that were not investigated. The researches were usually evaluation type whereby the data were lifted from sources. Half of the action researchers (50%) have off tangent recommendations which were not based from the conclusions. They tried to cite recommendations which the students think were options but were not included in the study.

The study also noted that only 12 percent of action researches have clear results or implications which are applicable in classroom management, students' discipline /behavior and method of teaching. Majority of the action researches identified several difficulties and problems in their classrooms but their research did not offer any technique or method to remedy the problem or difficulty. After enumerating the observed problems or difficulties no solutions to problems were tried, as to the sole purpose of action research.

Commonalities of the Studies and Research Gap

The action researches that were conducted converged on solving problems on discipline and behavioral problems of the students/pupils. Most of the action researches were descriptive studies with the test/quiz and observation guide as the main tool. Measures of central tendencies were applied to treat the data. The action researches of the education students have a wide research gap in terms of topic coverage and methodology. There was a limited topic on the classroom management that can help solve student discipline. There was also a wide gap on the research design whereby simple treatment of the data led to inconclusive generalizations/ conclusions and recommendations. The studies were superficially dissected due to limited scope of data. Very few case studies were experimental and development of teaching tools to solve a problem in the classroom was noted.

CONCLUSIONS

The action researches written by Education students (BSE and BEEd) of Bayambang during the School Year 2001-2007 are traditional and conventional. The content/focus on classroom management is weak on student discipline, behavior and attitude. The approach was observation, survey and practical. Majority of the studies are descriptive in nature and the samples were their students. Experimental design and case study are seldom used. Statistics and instruments used are weak and superficial which do not offer good conclusion and recommendations. As a consequence, identified research gap on focus, research design and methodology is wide and evident.

RECOMMENDATIONS

This study proposes a policy of strict supervision of the conduct of action research. Oral presentation of the studies should be conducted to a panel. Future studies should focus to a more relevant and innovative classroom management technique to lessen the problem on student/pupil misbehavior and discipline. The students should consider topics to measure the impact of a teaching material or method on the discipline of the child in the classroom. The design of action research should deal with repeated experiment or case study rather than evaluation or survey. Action researches about lesson presentation, motivation technique; work environment that will strike creativity among student teachers should be encouraged. Action researches should include development of evaluation techniques, tools, modules, kit, models, and systems.

REFERENCES

Fernandez, F. P. (2006). An assessment of all professional education courses in relevance to student teaching. *PSU-Bayambang Faculty Journal.*

Holsti, O. R. (1986). *The handbook on social psychology.* MA: Addison-Wesley.

Kemmis, S. & McTaggart, R. (1985). *The action research planner.* Victoria, Australia. Deakin University Press.

Miclat, E. F. (2005). *Trends in the Pangasinan State University Graduate School Research: Master in development management program SY 1990-2003.* Unpublished master's thesis, Pangasinan State University Graduate School, Urdaneta, Pangasinan.

Pambid, R. (2006). Trends of BSE undergraduate researches. *Pangasinan State University. College Research Council Faculty Journal.*

Zulueta, F. & N. Costales. (2005). *Methods of research thesis-writing and applied statistics.* Manila, National Bookstore.

DESIGNING COMPETENCY-BASED PERFORMANCE APPRAISAL FOR FACULTY MEMBERS TO ENHANCE EDUCATIONAL SERVICE QUALITY

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ABSTRACT

Performance appraisal for faculty members in Higher Education (HE) plays an importance role in motivating faculty members to convey their best services. This research aimed to design competency-based performance appraisal for faculty members that can be applied for several kinds of HE in Indonesia. Moreover, this research was conducted in HEs in Indonesia. Referring to the teacher and education regulation, especially in terms of professional, individual, social, and pedagogical competencies, the results are divided into three competencies; core competencies, managerial competencies, and technical competencies. Core competency is commonly diverged among HE institutions, but mostly includes integrity, customer orientation, achievement orientation, initiative, teamwork, empathy, and adaptability. In terms of managerial competencies, most of HE institutions consider planning, problem solving, influencing others, empowering, supervising, and controlling while technical competencies include teaching and learning, research, community services, computer literacy, and English mastery. The degree of required level on each competency depends on the condition and culture of each HE institution. Based on this research, it can be designed for the general model of competency-based performance appraisal for faculty members.

Keywords: Performance appraisal, core competency, technical competency

BACKGROUND

Higher education institution increasingly faces demand to be accountable to their stakeholder. Referring to Higher Education Long Term Strategy (HELTS), every university in Indonesia is demanded to implement Good University Governance (GUG) in doing educational services management. One of the dimensions, which has important role in educational delivering service, is faculty members' or educators' quality. Like other organizations, HE must develop and motivate not merely the strongest persons for high positions in organization, but all employees as well, including their educators (Oliver & Kandadi, 2006). They contribute superior value to educational process, specifically for teaching and learning process, research activity and community service.

Since government established teacher and lecturer regulation in 2005, and National accreditation board established the new criteria for department accreditation in 2009, there is a need to create performance appraisal system that assesses objectively and motivates effectively educators to perform well. Performance appraisal is not merely used for assessing performance, but it is also an essential part of organizational life. Performance appraisal system enables management to determine employee's performance in accordance

with the established objectives (Turk, 2003). By using performance appraisal system, educators can direct their behavior to achieve their institutions goal. Today, due to the hyper competition among private and public HE and the awareness quality of stakeholder in Indonesia, good performance from educator is the main requirement to be a good university governance and an excellent university.

Previous systems have indicated that the conventional performance appraisal (PA) system is not effective to motivate educators. Many indicators in research and community services are not sufficient to cover all and its assessment tends to have bias. Changing the conventional PA system with the new one, which is considered as the relevant indicators, objectivity, fairness, and the main purpose of PA, this research focuses on designing competency-based performance appraisal for educators. PA system should provide valuable information and enhance the effectiveness of human resource decisions and offer much potential for satisfying employees' need (Steesma & Visser, 2007).

LITERATURE REVIEW

Performance Appraisal in Higher Education

Performance appraisal systems are widely believed to give high contribution for managing human resources. It provides valuable information that can be applied to manager in making decisions about pay and promotions, identification of training and development needs, criteria for the development and validation of selection systems, and other activities in human resources.

Many previous researches found that there are certain purposes of performance appraisal, but generally there are four general uses: (a) to provide feedback about strength and weakness; (b) to distinguish between individuals to allocate rewards; (c) to evaluate and maintain the human resources system of the organization; and (d) to create of paper trail of documentation (Walsh & Fisher, 2005).

Believing that there is a strong relationship between performance appraisal and behavior outcome for directing all educator behavior to achieve university goals, the university designs model PA system for appraising the educators' performance. Educators must perform these; teaching and learning process, research activity, and community services.

Competency-Based Performance Appraisal

The concept of competency is usually applied to define the individual abilities and knowledge, oriented to effective performance in particular working environment. It is emphasized that individual working results as well as the whole business success depend on it. Competency is underlying characteristic of a person, resulting in superior performance in a job (Klemp, 1980; Boyatzis, 1982). According to Spencer and Spencer (1993, 9), competencies as the combination of underlying attribute, skills, trait, knowledge, and motives of a person have been causally related to superior performance in a job. Competencies have major contribution for determining success for individual to accomplish their jobs. This is a positive correlation between competencies and job performance.

To achieve top performance, every person is willing to go beyond the standard, that is, high performance and superior performance. To direct all individuals to develop their competencies linked with the organizational goal, performance model of appraisal system which installs job's competencies with organizational strategies and objectives is very crucial. According to Herzberg Theory, policy and performance appraisal is one of maintenance factors (Newstrom, 2007).

Generally, there are three main categories of competencies: core, managerial, and technical. Core competencies refer to the elements of behavior that all people must have in accomplishing job. Every job

in the organization needs it. Integrity, adaptability, learning orientation are the examples of core competencies. All jobs in all level organization have to fulfill these competencies. The second category is managerial competencies. Some researches determine this term as leadership competencies. These competencies enable person to lead people and organization to achieve their objectives. Ozcelik and Firman (2007) described that these competencies are related with managing, supervising, and developing people. These consist of 20 competencies, namely: leadership skill, customer focus, result-oriented, problem solver, communication skill, team worker, quality focus, interpersonal skill, technical expertise, business expertise, adaptable, staff developer, trustworthy, safety conscious, risk-taker, innovative, hard worker, time manager, and integrity purposeful (Abraham et al., 2001).

Technical competency enables individuals to perform their jobs technically well. This competency is directly related to the technical skill of jobs, computer skill, negotiation, language competency, accounting literacy, and others. This kind of competencies is varied by the kinds of jobs.

Competencies of Educators

The three main jobs of educator in HE in Indonesia are teaching and learning, research activity and community services. For doing all these activities, educator should have competencies like core, managerial, and technical. Competency is identified as knowing and understanding (theoretical knowledge, the capacity to know and understand), knowing how to act (applications of knowledge to certain situations), and knowing how to be (values, living and working with others, etc.).

Core competencies are mainly built from the skills, technical knowledge, and personal attributes that contribute to an educator success in learning and teaching, research and community services. Generally, many universities recognize that integrity is very important for educators. Educator with high integrity can be measured from how they: (a) place the good of the organization above personal, and other interests; (b) Resist undue political pressure in decision-making; (c) stand by decisions that are in the organization's interest, even if they could be perceived as unpopular; (d) do not abuse power or authority; (e) show consistency between expressed principles and behavior; and (f) take prompt action in cases of unethical behavior. Beside integrity, another core competencies which are usually viewed by the main critical for success as HE educators in are professionalism, adaptability, willingness to learn, achievement orientation, and customer orientation.

The technical competencies which are considered essential to perform as a teacher, researcher, and community services agents are almost the same among universities. Based on government regulations, these kinds of competencies are very clear but the requirements among other universities are different. The leading universities have more complex indicators. The competencies generally used are computer literacy, English mastery, ability in delivering course, ability to make a teaching book, research ability, and the quality of community services.

METHODOLOGY

The study used survey research doing on the perspective of how data were collected, and cross sectional research on the perspective of time dimension (Sekaran, 2006; Cooper & Schundler, 2001). This involved three kinds of HE in Indonesia, namely; university, institute, and school. Samples were drawn through purposive sampling. Research focuses on variable competencies, kinds of competencies, and required level of competencies for certain job.

The pilot project core competencies consist of: integrity, customer service orientation, professional style, continuous learning, adaptability, and capacity for a change. Managerial competencies consist of

leadership, planning, delegating, persuasive communication, problem solving and decision making, handling conflict, subordinate empowerment, and controlling.

Technical competencies for educator consist of teaching and learning, research, community services, documentation, and information and technology skills. *Required level* is the minimal requirement of certain competency that should be fulfilled by educator.

Instruments for measuring and identifying all competencies and analyzing educators' jobs are developed and validated by expert judgment. The stages of research are as follows:

1. Conducted job analysis for identifying job description and job specification;
2. Formulating competencies dictionary, through:
    a) Determining the description of: core competency, managerial competency, and technical competency.
    b) Determining the required level of competencies.
3. Designing system and administration procedure for performance appraisal.
    The objectives of this stage is to create several forms for appraising, establishing the distribution of forms, time duration of performance appraisal, deciding rater, collecting the performance appraisal result, and profiling the result; and
4. Transforming the procedure and process in human resources information system.
    In this stage, all procedures are translated into the system.

RESULTS AND DISCUSSION

The assignments that are usually given by educator are: teaching and learning (educational services); reseach and publication; community services; and campus development activity. After analyzing 40 kinds of competencies from three kinds of university, and considering the expert judgment top management and supervisor of the educator, it can be summarized that educator should be evaluated based on the following competencies:

1. Core competencies which consist of integrity, customer orientation, achievement orientation, initiative, teamwork, empathy and adaptability;
2. Managerial competencies such as: planning, problem solving, influencing others, empowerment, supervising and controlling; and
3. Technical competencies which consist of teaching and learning, researching, community services, computer literacy, and English mastery.

Each competency will be described in proficiency level. This level becomes a baseline of gap competencies. There are five levels of categories in each indicator of core competency, as follows:

1. Level 0: the employee must get a training and corrective action because their behaviors have not met yet the minimum requirements or the organization norm standard;
2. Level 1: the employee should be trained and they have willingness to change even though some of the minimum requirements can be achieved. They need improvement for some critical indicators;
3. Level 2: the employee accepts the changing process and tries to adapt it, their behaviors are consistent to achieve beyond the standard, and can manage themselves to achieve beyond the standard;
4. Level 3: the employee can manage change, their behaviors indicate effort to improve his achievement, dedicated, indicated and planning for self development, and developing positive behavior beyond the standard; and
5. Level 4: the employee behavior becomes role model for others, can anticipate changing and motivating others to learn, and become agent of a change for enhancing organizational performance.

Most of HE established level 4 for senior lecturers and level 3 for junior lecturers. Each indicator of Managerial competency is classified in five levels:

1. Level 0: have strong willingness to be trained, not achieved the minimum required level.
2. Level 1: the employee needs training, even though some of the minimum indicators can be achieved;
3. Level 2: the employee is aware with division condition but he/she still needs improvement in some of critical managerial indicators;
4. Level 3: the employee is able to consistently behave in enhancing division effectively; and
5. Level 4: the employee is able to manage his/her division and achieve organizational objectives.

The managerial competencies are similar to other researches in different jobs. Abraham et al. (2001) found that leadership skill, customer focused, result oriented, problem solver, communication skill, and team worker are the critical competencies for manager. In this research, competencies which are critical for educators are integrity, customer orientation, achievement orientation, initiative, teamwork, empathy, and adaptability. Like other competencies, each of technical competencies is also classified in five levels. The hierarchy of these competencies are:

1. Level 1: Concept, employee has knowledge of a fundamental concept about his job and skill.
2. Level 2: Working, employees have ability to apply appropriate procedures established and can overcome the routine problems but needing help if the problem is a complex one.
3. Level 3: Advanced, employees have an experience in applying knowledge and skill, can overcome routine and nonroutine problems independently, and able to become trainers for other employees;
4. Level 4: Mastery, employees have a lot of experience in applying it, have such authority in a recognized field within the scope of the organization, and able to overcome the complex situation that has not happened before.
5. Level 5: Leading, employees are able to develop organizational systems and procedures related to these fields and able to integrate various fields for continuous process improvement for organizations.

It was found that technical competencies for educators contained: (a) competencies in teaching: knowledge and ability to design courses instruction for learning, knowledge and ability to create and to publish teaching materials, ability in lecturing; and (b) competencies for doing research, competencies for doing community services, international language mastery, and computer literacy.

Because of this initial attempt of performance assessment, then the determination of the minimum requirements for a position is still not mature. One contributing factor is the difference in perception between the top office-bearers due to differences in expectations. According to the trainor, the behavioral expectations of people who fill those positions vary with their level of responsibility (Catano et al., 2007).

There are several important principles in implementing the system of competency based on performance appraisal of these faculty members:

1. The commitment of all parties are involved in the performance of appraisal process, starting from their own employees to top management;
2. performance assessment is carried out based on an objective;
3. subfactors/indicators that are reflected in the assessment of the type and level of competency must be relevant with the contents of the executed tasks andd work standards expected by the organization;
4. understanding of all the lecturers and other parties are involved in assessment process;
5. performance assessment is carried out consistently and continuously; and
6. the results of performance appraisal are openly communicated, through the discussions, for feedbacks.

Performance assessment process is conducted toward various patterns depending on the HE organization condition. Some of them use 180 degree and some of them use 360-degree approach. By using 180 degree approach, the process is simpler than 360 degrees. The 360° approach provides a more complete evaluation, penalizes an individual who focuses on only one constituency, and has the potential to result in a more balanced and accurate assessment (Skipper & Bell, 2006). Other research also found that this approach results in more valid results and more satisfied employees (Sanwong, 2008). If this design will be applied, the better result will be achieved. By using peer evaluation, it can be a useful tool for strengthening horizontal links within organizations (Pak, 2009).

SUMMARY

Competencies based on performance appraisal, as part of human resource management tools, should be applied for motivating faculty members to accomplish their jobs and its result satisfies them. From HE organization perspective, this system will facilitate organization to perform better in educational service quality.

An important early stage for designing competency based on performance appraisal for faculty members is to identify the key competencies that faculty members should have. In general, the three competencies are the core competency, managerial competency, and technical competency. Core competencies include integrity, customer orientation, achievement orientation, initiative, teamwork, empathy and adaptability, whereas managerial competencies consist of planning, problem solving, influencing others, empowering, supervising and controlling; and technical competency consists of teaching and learning, research, community services, computer literacy, and English mastery.

This research also results in proficiency level to all competencies and designs the competencies dictionary. Minimum level is required as the proficiency level which is determined by considering the organization conditions. Competency dictionary is used for reference in the assessment to reduce bias in making judgments.

There are some limitations of the research. First, the limitations of amount in the number o respondents tend to limit generalization. Second, it is very difficult to determine the competency minimum standards for a specified level due to differences in organizational conditions, and organizational culture. Therefore, every HE organization should review it before implementing this system to their organizations. Third, this system should be evaluated every year to enhance effectiveness. Besides, in the further development of this system, human resource management information systems should be integrated. This system integration is important that performance appraisal can be related to a variety of management decision-making human resources, such as for training and development, promotion and career development and compensation systems.

REFERENCES

Abraham, S. E, Karns, L. A., Shaw, K. & Mena, M. A. (2001). Managerial competencies and the managerial performance appraisal process. *The Journal of Management Development, 20*(10), 812-852.

Catano, V. N., Darr, W. & Chambell, C. A. (2007). Performance appraisal of behavior-based competencies: A reliable and valid procedure. *Personnel Psychology, 60*, 201–230.

Jurse, M. & Tominc, P. (2008). Professional competences of graduates as a labour market mechanism for aligning Business School curriculum reform with the Bologna Declaration Principles. *Management*, *13*(1), 17-36

Newstrom, J. W. (n.d.). *Organizational behavior: Human behavior at work*, Singapore: McGraw-Hill Companies, Inc.

Oliver, S. & Kandadi, K. R. (2006). How to develop knowledge culture in organizations? A multiple case study of large distributed organizations. *Journal of Knowledge Management*, *10*(4), 6-24.

Pak, D. (2009). Implement strategic 360 degree appraisal for a university. *Global Business and Management Research: An International Journal*, *1*(2), 60-69.

Sanwong, K. (2008). The deveiopment of a 360 degree performance. *International Journal of Management*, *25*(1), 16–22.

Skipper, C. O. & Bell, L. C. (2007). Assessment with 360° evaluations of leadership behavior in construction project managers. *Journal of Management in Engineering*, *22*(2), 75–80.

Steensma, H. & Visser, E. (2007). Procedural justice and supervisor' personal power bases: Effects on employees' perceptions of performance appraisal sessions, commitment and motivation. *Journal Collective Negotiations*, *31*(2), 101-118.

Turk, K. (2003). Performance appraisal in the University of Tartu. *EBS Review*, 143-150.

UU No. 14 Tahun 2005: Teacher and Lecturer Regulations of Republic of Indonesia.

Walsh, K. & Fisher, D. (2005). Action inquiry and performance appraisals: Tools for organizational learning and development. *The Learning Organization*, *12*(1).

TOWARDS ENHANCING QUALITY AND SATISFACTION IN THE MALAYSIAN PRIVATE EDUCATIONAL ENVIRONMENT

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ABSTRACT

The educational environment is very dynamic and challenging with intensifying competition. Educational institutions are being publicly compared to each other. Therefore, providing and maintaining quality education, as well as understanding student satisfaction, is becoming increasingly important.

This research seeks to evaluate the factors that influence student satisfaction and rank the perceived importance of these factors in the Malaysian private educational environment. The influence of variables such as gender, year of study, nationality, and different programmes of study on student satisfaction was also considered. A positivist approach was as well as the Douglas et al.'s (2006) service-product bundle model, which includes elements such as the facilitating or physical goods; the explicit sensual service provided; and the implicit psychological service were adopted in this research. The outcomes of the research will enable educational institutions to allocate resources in a more efficient manner by taking into consideration the factors that influence satisfaction and ranking their importance as inputs to quality education.

Keywords: Quality, satisfaction, higher education, survey

BACKGROUND OF THE STUDY

The Malaysian education industry is playing a very important role in national development. The higher education sector is under the jurisdiction of the Ministry of Higher Education (MOHE). The Malaysian Qualifications Agency (MQA) is a MOHE agency and has been approved by the Parliament to implement the Malaysian Qualification Framework (MQF), covering both public and private higher educational institutions as a basis for quality assurance in higher education. The Malaysian private higher educational sector plays a major role in attracting international students and has been rapidly increasing in size. It is considered to be a catalyst for attaining high quality knowledge as well as producing competitive human capital (University Education in Malaysia, 2009). There were 16 private universities, 16 private university colleges, 4 foreign branch campus universities and 485 private colleges in Malaysia in 2007, with 323,787 students in 2006 (Private Universities in Malaysia, 2009).

The educational environment is very dynamic, challenging and competitive. As a result, providing quality education, as well as understanding student satisfaction, has become increasingly important to educational institutions. In an attempt to better understand the factors that influence student satisfaction and,

therefore, identify strategies for improving service quality at Malaysian universities, this research intends to:

1. Evaluate the factors that influence student satisfaction;
2. Measure students' perceptions on the importance of each factor; and
3. Evaluate the influence of factors such as gender, nationality; programme of study, year of study, and semester grade have on the results.

LITERATURE REVIEW

Student satisfaction and service quality.

Student satisfaction is a short-term attitude that results from the evaluation of their experience with the education services received. Hatcher et al., (1992) indicate that student satisfaction is the attraction, pride, or positive feelings students develop towards a programme or an institution. Elliott and Shin (2002) state that focusing on student satisfaction will enable the universities to re-engineer their institutions to address the needs of the students, and at the same time, enable them to develop a unlimited monitoring system towards fulfilling those needs.

Researchers tend to be clear and precise about satisfaction and service quality even though the terms are used interchangeably by practitioners and writers. Brady and Cronin (2001) state that service quality actually reflects a customer's (or user's) perception of elements of service since it is a focused evaluation that includes interaction quality, physical environment quality, and outcome quality. With respect to quality education, many studies on student satisfaction are linked to service quality. Satisfaction includes perceptions of service quality, but also other influences such as university fees, personal and situational factors. Zeithaml and Bitner (2003) suggest that service quality involves the expectations of the customers (users) in relation to the actual performance of the providers.

Evaluation of the service quality models.

In the general literature, several service quality models have been developed to measure service quality and its influence on satisfaction. The most widely used model is the SERVQUAL model developed by Parasuraman et al., (1985) with 10 dimensions but was refined into five dimensions (tangibles, reliability, responsiveness, assurance and empathy) in 1988. The SERVQUAL model has been highly valued and widely adopted in several types of service industries such as hospitals, banks, airlines, educational institutions, retail settings, telecommunications. and others. It also has been widely used in countries such as the United States, Australia, China, South Africa, The Netherlands, Hong Kong, and the UK as well as Malaysia (Ladhari, 2008). Even though it has been widely adopted and highly valued, it has also received a lot of criticisms.

A newer model called SERVPERF was developed by Cronin and Taylor (1992) in response to the strong criticisms of the SERVQUAL model. This model is based on Performance Model Satisfaction of the SERVQUAL scale with a reduction in the number of items but retention of the five quality dimensions. The expectation items were deleted and not used at all. This model has also received criticism for concentrating too much on the psychometric dimensions as well as the methodological soundness of its scales. Sureshchandar et al., (2001) responded to the criticisms of SERVQUAL model by developing The Human-Societal Element Model. In doing so, they addressed other important elements of service quality such as the service product or the core service as well as the standardization and systematization of service delivery.

Yet another model that is more appropriate for this study was developed by Douglas et al., (2006) and utilizes the concept of the "service-product bundle" to measure student satisfaction and the importance of the factors to the students. Three elements in the bundle are the physical or facilitating goods; the sensual service provided (the explicit service); and the psychological service (the implicit service). The service-product bundle refers to the inseparable offering of many goods and services. The bundle provides a more comprehensive understanding of the needs of the students than most other models and is, therefore, more suitable for the education sector.

Study and Semester Grade of Gender, Nationality, Year of Study, Programmes

Soutar and McNeil (1996) found that there is significant relationship between gender and satisfaction with service quality in tertiary education, as males were more satisfied than females. However, another study conducted by Joseph and Joseph (1998) indicates that there is no significant difference between males and females. With regard to the year of study, Corts et al., (2000) conclude that there is no significant difference between junior and senior students' perceptions of satisfaction. Hill (1995) found that there is stability on the students' expectations over time which suggests that they were probably formed prior to arrival at university. However, students who have been studying for longer years perceived that there was a reduction in their quality experience indicating that this was less stable. A study by Oldfield and Baron (2000) confirms this further as the mean score for the final year students was lower than those of the first year. This suggests that as students become more experienced in the higher educational settings, they tend to be more critical in their perceptions of the service quality. Nurlida's study (n.d) indicates that the international students' choice satisfaction resulted from satisfaction with the information acquired with regards to the college attributes. Aitken (1982) states that academic performance is one of the factors that can determine satisfaction.

METHODOLOGY

A questionnaire based on Douglas et al's (2006) service-product bundle has been adapted in this study. The questionnaire consists of five sections (A, B, C, D and E) developed to determine the satisfaction level and the importance of the service-product bundle for students at a Malaysian private educational institution. Section A consists of four questions on facilitating goods and five questions on physical facilities. Section B consists of six questions on explicit service and Section C consists of 11 questions on implicit service. These 26 items utilized a five-point Likert scale ranging from *Very Unsatisfactory to Very Satisfactory* and *Very Unimportant to Very Important*. Section D seeks to obtain descriptive information on the students relating to gender, year of study, nationality, programme of study, and semester grade. Section E allowed the respondents to provide their comments.

A quantitative sample of 70 respondents (80% response rate) was drawn from students studying at a private educational institution in Malaysia through convenience sampling method. The questionnaire was pretested on 30 students who took on average about 20 minutes to complete the questionnaire. This was used to test the reliability of the survey instrument and make adjustments to any questions that the students had difficulty answering.

RESULTS AND DISCUSSION

The 70 student-respondents consisted of 47.1 percent male students (52.9% female) studying Business Administration (14.3%), Accounting (34.3%), International Business (31.4%) and Financial Planning (20.0%) degrees. Seventy percent of students were in their first year of study, 31.4 percent in their second year and 11.4 percent in their third year of study. Seventy percent of students were Malaysian national

and 30 % international students. Approximately 5.9 percent of students have an average grade of A, 30 percent with B, 52.9 percent with C, and 11.4 percent with a D grade.

In order to ensure that there is consistency of the variables, reliability tests (Cronbach's alpha) were carried out. The results are presented in Table 1. Sekaran (2003) indicates that reliability that is above 0.80 is considered good and the range of 0.70 can be considered as acceptable (0.60 is considered poor). The internal reliability of the factors is satisfactory in this research.

Table 1
Reliability coefficient for satisfaction and importance elements

Element	Number of factor	Satisfaction element	Importance element
The facilitating goods	4	0.826	0.806
The physical facilities	5	0.835	0.864
The explicit service	6	0.855	0.796
The implicit service	11	0.883	0.866

To analyze students' level of satisfaction in the Malaysian private educational environment, mean student scores were computed and are presented in Table 2. The results show that students are most concerned with approachability of teaching staff; the level of difficulty of the subject content; staff teaching ability; friendliness of the teaching staff; and the sense of competence, confidence and professionalism of the lecturers. Previous studies by Price et al., (2003) and Douglas et al., (2006) have reported similar results. Elements such as catering, recreational amenities, decoration, lecture theatres, and supplementary handout documents/ materials received the lowest student scores.

Table 2
Factors that Influence Students' Satisfaction-the Mean and Standard Deviation

Ranking	Highest scoring element	Mean *(Std. Dev)*	Lowest scoring element	Mean *(Std. Dev)*
1	Approachability of teaching staff	3.55 *(0.84)*	Catering	2.65 *(1.01)*
2	Level of difficulty of subject content	3.52 *(0.86)*	Recreational amenities	2.80 *(0.77)*
3	Staff teaching ability	3.52 *(1.13)*	Decoration	2.81 *(0.92)*
4	Friendliness of teaching staff	3.50 *(0.91)*	Lecture theatres and tutorial rooms	2.99 *(1.01)*
5	Sense of competence, confidence and professionalism of lecturers	3.47 *(0.91)*	Supplementary handout documents/ materials	3.00 *(0.83)*

As illustrated in Table 3, the respondents perceive that factors such as staff teaching ability, knowledge level of staff, university's environment, consistency of teaching, and feelings that their best interests are being served as most important. The least important factors were recreational amenities, decoration, catering, and the recommended module. Students seem to be very concerned with the teaching and learning elements rather than the physical facilities and the facilitating goods.

Table 3
Students' Perceptions of the Importance of Each Factor-the Mean and Standard Deviation

Ranking	Highest scoring element	Mean *(Std. Dev)*	Lowest scoring element	Mean *(Std. Dev)*
1	Staff teaching ability	4.45 *(0.89)*	Recreational amenities	3.51 *(0.86*
2	Knowledge level of staff	4.40 *(0.93)*	Decoration	3.52 *(0.75)*
3	University environment	4.32 *(0.71)*	Catering	3.55 *(0.94)*
4	Consistency of teaching	4.25 *(0.73)*	Supplementary handout documents/ materials	3.55 *(0.98)*
5	Feelings that their best interests are being served	4.20 *(0.84)*	Recommended module	3.65 *(0.79)*

A one-way ANOVA (Bonferroni method) was employed to test the relationships between mean student ratings for each element of the service-product bundle (facilitating goods, explicit service, and implicit service) and descriptive characteristics such as gender, nationality, year of study, programme of study, and semester grade. The ANOVA test results are in Table 4.

Table 4
ANOVA Tests

Satisfaction and importance elements	Descriptive variables				*F* Ratio	Sig.	Sig. difference
	Year of Study						
	1	2	3				
Satisfaction of Facilitating Goods	3.08	3.47	3.96		8.129	.001	3>1
Satisfaction of Physical Facilities	3.01	2.50	3.00		4.224	.019	1>2
Satisfaction of Explicit Services	3.27	3.36	4.18		5.793	.005	3>1,2
Satisfaction of Implicit Services	3.20	3.19	4.00		7.384	.001	3>1,2
Importance of Implicit Services	4.01	4.10	4.69		5.778	.005	3>1,2
	Programme of Study						
	FP	BA	A	IB			
Satisfaction of Facilitating Goods	3.71	2.92	3.12	3.42	3.991	.011	FP>BA,A
Importance of Implicit Services	4.43	3.83	3.89	4.29	5.228	.002	FP>BA,A
	Semester Grade						
	A	B	C	D			
Satisfaction of Implicit Services	4.02	3.22	3.32	2.95	3.198	.029	A>D
Importance of Implicit Services	4.70	4.16	4.15	3.53	5.569	.002	A>B,C,D
	Gender						
	Male	Female					
Importance of Facilitating Goods	4.06	3.62			6.827	.011	M>F

FP-Financial Planning **BA**-Business Administration **A**-Accountancy **IB**-International Business

CONCLUSION AND RECOMMENDATIONS

This study has evaluated the factors that influence student satisfaction in a Malaysian private university and measured student's perceived importance of each factor. The highest scoring elements that influence the level of students' satisfaction are approachability of teaching staff; level of difficulty of subject content; staff teaching ability; friendliness of teaching staff; and the sense of competence, confidence, and professionalism of lecturers. On the other hand, the lowest scoring elements are catering; recreational facilities; decoration; lecture theatres and tutorial rooms, and the supplementary handout documents/ materials. Students perceived factors such as staff teaching ability; knowledge level of the staff; university environment; consistency of teaching; and feelings that their best interests are being served are considered important. The students are less concerned about the recreational facilities; decoration; catering; supplementary handout documents/ materials; and the recommended module.

The results also illustrated that factors such as gender; nationality; programme of study; year of study; and semester grade influence both levels of student satisfaction and importance ratings. Significant differences exist for satisfaction elements with regard to the facilitating goods and the year of study, programme of study; physical facilities and the year of study; explicit services and the year of study; the implicit services and the year of study, and the semester grade. As for the importance of elements, significant differences exist with regard to the facilitating goods and gender; implicit services and year of study, programme of study, and the semester grade, respectively.

A major challenge facing educational institutions is to identify students' needs and to develop the appropriate strategies towards fulfilling those needs. Students, as the direct recipients of the educational services, have their own expectations, perceptions, preferences, and opinions on the factors that affect their levels of satisfaction. As stated by Arambewela and Hall (2008), addressing the needs of the customers can ensure customer satisfaction leading to organizational success. Providing quality education and continually monitoring levels of student satisfaction and their perceptions of the factors are important in this dynamic and challenging educational environment.

This exploratory study provides a framework for a further more comprehensive research with a larger sample size. Analysing student satisfaction is becoming very important and critical especially in the Malaysian private educational environment because apart from the intensifying competition, students are constantly evaluating educational services. Educational institutions may have to allocate their resources in a more efficient and effective manner in order to better satisfy student needs and provide a better quality education in the future.

REFERENCES

Aitken, N. (1982). College student performance, satisfaction, and retention: Specification and estimation of a structural model. *Journal of Higher Education, 53*(1), 32-50.

Arambewela, R. & Hall, J. (2008). A Model of student satisfaction: International postgraduate students from Asia. *European Advances in Consumer Research, 8*, 129-135.

Brady, M. K. & Cronin, J. J. (2001). Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. *Journal of Marketing, 65*(3), 34-49.

Corts, D. P., Lounsbury, J. W., Saudargas, R. A. & Tatum, H. E. (2000). Assessing undergraduate satisfaction with an academic department: A method and case study. *College student Journal.* Retrieved September 2000, from http://www.findarticles.com/ cf0/m 0FCR/mag.jhtml

Cronin, J. J. & Taylor, S. A. (1992). Measuring service quality: A reexamination and extension, *Journal of Marketing, 56*(3), 55-68.

Douglas, J., Douglas, A. & Barnes, B. (2006). Measuring student satisfaction at a UK university. *Quality Assurance in Education, 14*(3), 251-267.

Elliot, K. M., & Healy, M. A. (2001). Key factors influencing student satisfaction related to recruitment retention. *Journal of Marketing for Higher Education, 10*(4), 1-11.

Elliot, K. M., & Shin, D. (2002). Student satisfaction: An alternative approach to assessing this important concept. *Journal of Higher Education Policy and Management, 24*(2), 197-209.

Hatcher, L., Kryter, K., Prus, J.S., & Fitzgerald, V. (1992). Predicting college student satisfaction, commitment and attrition from investment model constructs. *Journal of Applied Social Psychology, 22*(16), 1273-1296.

Hill, F. M. (1995). Managing service quality in higher education: The role of the student as primary consumer. *Quality Assurance in Education, 3*(3), 10-21.

Joseph, M., & Joseph, B. (1998). Identifying needs of potential students in tertiary education for strategy development. *Quality Assurance in Education, 6*(2), 90-96.

Ladhari, R. (2008). Alternative measures of service quality: A review. *Managing Service Quality, 18*(1), 65-86.

Ministry of Higher Education (MOHE) (2009). *Ministry of Higher Education: Education on Malaysia.* Retrieved May 5, 2010, from http://www.mohe.gov.my/educationmsia /links.php

Nurlida, I. (n.d). *International students' satisfaction in their choice of a private higher education institution.* Taylor's University College, Malaysia.

Oldfield, B. M. & Baron, S. (2000). Student perception of service quality in a UK university business and management faculty. *Quality Assurance in Education, 8*(2), pp 85-95.

Parasuraman, A., Zeithaml, V. A. & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing, 49*, 41-50.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12-40.

Price, I., Matzdorf, F., Smith, L. & Agahi, H. (2003). The impact of facilities on student choice of universities. *Facilities, 21*(10), 212-222.

Private Universities in Malaysia. (n.d.). Retrieved December 22, 2009, from http://www.etawau.com/edu/IndexUniversityPrivate.htm

Sekaran, U. (2003). *Research methods for business: A skill building approach.* New York: John Wiley & Sons.

Soutar, G. & McNeil, M. (1996). Measuring service quality in a tertiary institution. *Journal of Educational Administration, 34*(1), 72-82.

Sureshchandar, G. S., Rajendran, G. S., & Kamalanabhan, T. J. (2001). Customer perceptions of service quality: A critique. *Total Quality Management, 12*(1), 111-124.

University Education in Malaysia. (2009). *The private higher education management sector.* Retrieved May 20, 2010, from http://www.etau.com/edu/Department/Private_ higher_education.htm

Zeithaml, V. A., & Bitner, M. (2003). Service marketing: Integrating customer focus across the firm (3rd ed.). New York: Mc-Graw-Hill.

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