

SEAAIR 20|20: A Review of SEAAIR Annual Conferences 2007 – 2021

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ABSTRACT

Since its establishment in 2000, the South East Asia Association for Institution Research (SEAAIR) has organized the SEAAIR Annual Conference in different countries in South East Asia (SEA), including the extension of SEA, which was China (2002), Taiwan (2019) and Korea (2022). Each year, the Conference focuses on different themes based on the country's institutional research and current educational and socio-economic development. The paper reviews the development of SEAAIR conference themes and subthemes to reveal the relatedness of the theme based on the country's contemporary educational or socio-economic development. The analysis of the paper submission based on the country for 2001 – 2021 is presented to provide an analysis of the trend and active participation level of the countries at the SEAAIR Annual Conference.

Keywords: Institutional Research, Quality Management, Teaching and Learning, Education Technology

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Introduction

The South East Asia Association for Institutional Research (SEAAIR) celebrates its 20th Anniversary in 2021. Such celebration indicates that SEAAIR has also been organizing the 20 Annual SEAAIR Conference, leaving its footsteps in various countries in Southeast Asia and East Asia. Therefore, it is the right time to review the achievements in the past two decades and set a direction for the coming years.

The Annual SEAAIR Conference is organized to gather researchers and the institution's key personnel of the Institutes of Higher Education (IHE). Most delegates from the ASEAN countries and some from outside the ASEAN region meet and discuss the advancement of institutional research based on the Conference's theme.

Although the Annual SEAAIR Conference is an academic conference, this is not solely focusing on the academic research paper presentation and panel discussions on the theme. The Conference also promotes cultural exchanges between countries. For every Conference, the host university organizes cultural events such as cultural nights or city tours to introduce the country's culture to the delegates.

The conference theme sets the tone for the Conference and provides an objective and a direction for all discussions held during the Conference. In a few words, the theme communicates the host university's intent for the Conference based on the university's values and direction and the contemporary development in the country or region.

On the other hand, the subthemes provide further elaboration on the conference theme, where delegates have a more detailed discussion from different angles and perspectives. The subthemes serve as a divergent-convergent thinking mechanism and provide the delegates with a practical brainstorming session. During the divergent thinking process, the ideas from the delegates were gathered through the question-and-answer sessions of the keynote speeches, panel discussions, and full-paper presentations. The moderators then converge such ideas based on the conference theme into an essential takeaway for the delegate at the end of the Conference.

This paper presents a detailed analysis of the Conference through two major discussion areas: "themes" and "paper submissions". The themes category included investigating themes and subthemes based on the countries and keywords. On the other hand, the paper submission category probed into the analyses of these submissions based on the countries, authors, and keywords. Such a presentation aims to understand the relevant themes and paper submissions better, providing a reference for future conferences.

Methodology

This research adopted the Documentary Research Methodology (Scott & Marshall, 2015). Documentary research uses personal and official documents, including publications, newspapers, computer files, and directories, as source materials to provide qualitative and quantitative analyses of the research theme and objectives.

Documentary data analysis is a cyclic interactive process of data collection, reduction, display, and conclusion drawing or verifying (Miles & Huberman, 1994). As shown in Figure 1, once the data is collected, the data is reduced to generate new ideas on what should be presented in the data display.

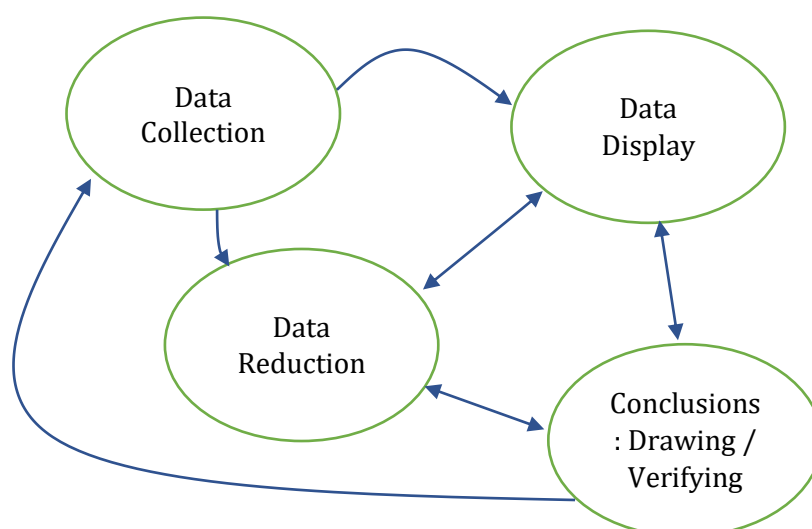


Figure 1: Components of Data Analysis: Interactive Model (Figure reproduced from (Miles & Huberman, 1994))

751 papers were collected from 13 proceedings (2007 – 2021), with analyses of subthemes, authors, countries, and keywords performed on these papers. Detailed analyses of papers (authors, countries, and keywords) were performed through the Data Collection – Data Reduction – Data Display process. Such reduction and display bring the conclusion to be drawn. The analyses of the themes and subthemes followed the Data Collection – Data Display process as the data was obtained, and the conclusions were drawn through the presentation of the data collected. Such a cyclic process was adopted as the research framework for this paper.

Adopting the idea from (Cohen, Manion, & Morrison, 2007), the validity of the research methodology and data may be strong in the documents written for a specific purpose, and the reliability by corroboration. (Scott, A Matter of Record, 1990) suggested the reliability and validity of documentary research: authenticity, credibility, representativeness, and meaning. Data collected for this research are officially published proceedings (with official ISBN or ISSN numbers) available from (SEAAIR, n.d.) All papers in the Conference were reviewed through a double-blind review process to confirm the quality of the papers. Hence the data collected in this research is valid and reliable.

The limitation of the study

Table 1 summarises the availability of information on the Conference Theme, Sub-themes, and Proceedings for the SEAAIR Annual Conference 2001 – 2021. It should be noted that the information is obtained from the SEAAIR website (SEAAIR, n.d.). Hence there was some missing information due to the unavailability of information on the website.

Furthermore, the COVID-19 Pandemic hit the world in 2020 and 2021. The postponement of the Annual SEAAIR Conference 2020 in Malaysia was the reason for the unavailability of the information for 2020.

Organized by the SEAAIR Executive Committee, the Annual SEAAIR Conference 2020 was held on the virtual platform for the first time; hence, the host for this year was listed as Virtual.

Table 1: The availability of the information on the Conference Theme, Sub-themes, and Proceedings for the SEAAIR Annual Conference 2001 – 2021.

Year	Reference	Conference Theme	Conference Sub-Themes	Conference Proceedings
2001	(SEAAIR, n.d.)	☒	☒	☒
2002	(SEAAIR, n.d.)	☒	☒	☒
2003	(SEAAIR, 2003)	☑	☒	☒
2004	(SEAAIR, n.d.)	☑	☒	☒
2005	(SEAAIR, 2005)	☑	☑	☒
2006	(SEAAIR, 2006)	☑	☑	☒
2007	(SEAAIR, 2007)	☑	☑	☑
2008	(SEAAIR, 2008)	☑	☑	☑
2009	(SEAAIR, 2009)	☑	☑	☒
2010	(SEAAIR, 2010)	☑	☑	☑
2011	(SEAAIR, 2011)	☑	☑	☑
2012	(SEAAIR, 2012)	☑	☑	☒
2013	(SEAAIR, 2013)	☑	☑	☑
2014	(SEAAIR, 2014)	☑	☑	☑
2015	(SEAAIR, 2015)	☑	☑	☑
2016	(SEAAIR, 2016)	☑	☑	☑
2017	(SEAAIR, 2017)	☑	☑	☑
2018	(SEAAIR, 2018)	☑	☑	☑
2019	(SEAAIR, 2019)	☑	☑	☑
2020	(SEAAIR, n.d.)	☒	☒	☒
2021	(SEAAIR, 2021)	☑	☑	☑

Host Universities

Over the 20 years, Annual SEAAIR Conferences were hosted by universities from eight countries, six located in Southeast Asia and two in East Asia.

Figure 1 shows the map of the host countries for the Annual SEAAIR Conferences from 2001 to 2021. In addition, Table 1 in the following section also illustrates the hosting country based on the year. Since the organization was established in Malaysia, the countries hosted the most significant number of annual conferences, which were 2001, 2002, 2006, 2009, and 2012, with the first Conference receiving a great response of about 100 delegates (SEAAIR, n.d.) Within 20 years, six out of 10 ASEAN countries took a turn to organize the Annual SEAAIR Conference. The four countries worth future exploration are Brunei, Cambodia, Laos, and Myanmar.

From Figure 2, despite the Conference being named the Annual "South East Asia" Association for Institutional Research Conference, the association also expanded its connection to China (2004) and Taiwan (2019), where the two conferences were successfully held outside the Southeast Asia region. The connection pool will be further expanded in 2022, when the 22nd Annual SEAAIR Conference is held in Korea, making it the third external connection for SEAAIR.

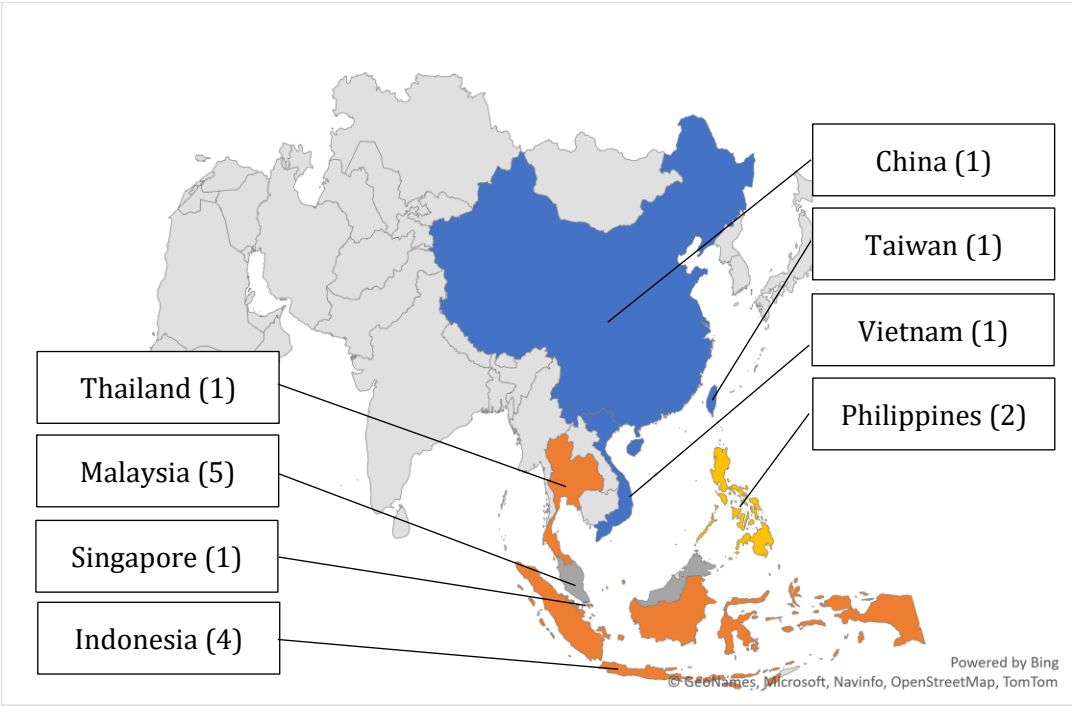


Figure 2: The host countries for Annual SEAAIR Conferences from 2001 to 2021. The number indicated next to the country represents the number of conferences the country hosts. The SEAAIR 2021 was held on the virtual platform; hence, it is not displayed in the figure.

Conference Themes

The conference theme sets the Conference's tone and agenda and gives the delegates the first impression. The clear tagline gives the public the core message of the Conference, and the discussion sessions during the Conference are designed based on this core message. The conference themes attract academics keen to address contemporary issues while keeping inclusive and welcoming touch (Edelheim, Thomas-Francois, Åberg, & Phi, 2017). Further quoting the author's description,

"Themes that aim at attracting those at the cutting edge, but keeping an inclusive, welcoming touch. The space filled with those words are often like small images, depicting the field of research with much sharper contours and brighter colors than can be achieved in the researching practice" (Edelheim, Thomas-Francois, Åberg, & Phi, 2017, p. 7).

Table 2 shows the conference theme from 2003 to 2021. At a glance, the conference themes merely discuss the host country's concerns through an academic approach.

Table 2: The host countries and conference theme from 2003 to 2021.

Year	Host Country	Main Theme
2003	Thailand	Institutional Research and Quality Development in Higher Education
2004	China	Entrepreneurial University of the 21 st Century
2005	Indonesia	Higher Education Reform Facing Local and Global Changes
2006	Malaysia	Transforming Higher Education for the Knowledge Society
2007	Thailand	Self-Sufficient and Sustainable Higher Education- An Agenda
2008	Indonesia	Institutional Capacity Building Toward Higher Education Competitive Advantage
2009	Malaysia	The Future of Higher Education
2010	Philippines	Towards Global-ASEAN Institutional Research Strategic Alliances
2011	Thailand	University Social Responsibility: Pathways to Excellence
2012	Malaysia	Culturalizing World-Class Higher Education in ASEAN
2013	Indonesia	Entrepreneurship In Higher Education and Institutional Effectiveness
2014	Philippines	Cross-Cultural Education in AEC 2015: Realizing Possibilities, Defining Foundations
2015	Vietnam	Internationalisation and Inclusivity of Higher Education in South East Asia
2016	Thailand	Academic and Social Engagement in Higher Education
2017	Singapore	ASEAN Higher Education at the Crossroad: Challenges, Changes, Capacities, and Capabilities
2018	Indonesia	ASEAN@50: Sustaining Student Competencies and Employability
2019	Taiwan	Transforming Intelligence into Action in IR
2021	Virtual	Diversity in Education

Booming from the 1980s, entrepreneurship in China has generated significant economic growth. Such eloquent economic growth has brought the host country, China, to continue investigating the academic institution's contribution to the "Entrepreneurial University of the 21st Century". China has implemented the Five-Year Plan since 1957 (Economic Policies, n.d.) The plan was initially focused on industrial development at the expense of other sectors of the economy. Currently running on the 14th Five-Year Plan, the country seeks to deal with the worsening relations between China and the USA and the COVID-19 Pandemic that caused the economy to shrink in 2020. The academic discussion on the entrepreneurial university fit nicely into the country's focus on the economy back then.

Indonesia, the largest economy in Southeast Asia, has been performing well economically since the recovery from the Asian financial crisis in the later 1990s (The World Bank, 2022). Furthermore, Indonesia managed to cut the poverty rate by half since 1999, to under 10%, just before COVID-19 hit the country in 2020. Like China, Indonesia has a 20-year development plan from 2005 to 2025, segmented into 5-year medium-term development plans. Being the host country for SEAAIR Annual Conferences in 2005, 2008, 2013, and 2018, which is where the 20-year development plan was running, the conference theme is all tailored to the contributions of the institutes of higher learning toward the growth economy, from the angles of reformation, capacity building, entrepreneurship, and economic sustainability. Such sequences also reflect how SEAAIR strategically contributes to the nation's economic growth by reforming the nation to ensure economic sustainability.

Host universities in Malaysia and Thailand designed the Conference based on the education development in the country. Malaysia hosted the SEAAIR Annual Conferences in 2006, 2009, and 2012, which are in the Education Development Plan & Policy 2001-2010 and Education National Key Results Area 2010-2012 (Devan, 2021). The themes in 2006 and 2009 address the nation's education development well, focusing on the transformation, then planning the future for higher education in the region. As the country moved to focus on the Key Results Area, the Conference organized in 2012 then addressed the need for "World Class Higher Education in ASEAN" to bring higher education in the region to the next level, looking at the world's recognition of the institutions of higher education in Southeast Asia.

When the conferences were held in Thailand, the host universities took the opportunity to address higher education quality, sustainability, and social engagement. The Thailand National Education Commission announced the National Education Act in 1999 to reform teaching and learning methods and improve environments (Office of the National Education Commission, 1999) (Bureau of International Cooperation, 2008). In addition, the Tenth National Economic and Development Plan (2007 – 2011) introduced the concept of Education Sustainability Development. It directed the national development framework with His Majesty King Rama IX's Sufficiency Economy (Nuamcharoen & Dhirathiti, 2018). Hence, the discussion on the quality of education with social engagement for education sustainability development fits nicely in the national policy and development plans.

SEAAIR Annual Conference placed its footstep in Vietnam in 2015. The country set the Conference's tone on "Internationalisation and Inclusivity". The Vietnam government released the Higher Education Reform Agenda (HERA) 2005, which outlined a comprehensive strategy to reform the higher education system in the country from 2006 to 2020 (Hoang, Tran, & Pham, 2018). The strategy requests that higher education institutions address the country's socio-economic development to meet the demand for a highly skilled workforce that can be integrated into the international market.

The Association of Southeast Asian Nations (ASEAN) is said to be one of the keystones of the Philippines' foreign and trade policies (Shead, 2017). The Philippines has been actively participating in the ASEAN's regional agenda for its relevance and importance at the international level. The Philippines asserts that ASEAN should remain the central focus for internal and external dealings to continue driving regionalism and be the interlocutor between the competing powers in the region. The country has been actively promoting peaceful international trade that abides by the rules and practices that benefit the region. This is in tune with the idea of the ASEAN Economic Community (AEC). Hence, it is easy to realize that conferences in 2010 and 2014 addressed the issues in ASEAN.

Singapore ranked 14 in the overall Best Countries' global performance on various metrics in 2021, being the best country in Southeast Asia (U. S. News, 2021). Furthermore, Singapore is also ranked the second most expensive city in the world (gov.sg, 2021). With these factors, the high cost of organizing a regional conference is always considered by the host university in Singapore. Notwithstanding the high cost, the Annual SEAAIR Conference managed to record its first Conference in Singapore in 2017. The Republic is at the forefront of innovation in higher education to address the global technological paradigm shift in Industry 4.0, which was initialized in 2011 and then popularised in 2016 (Gleason, 2018); (Dima, 2021). The host university seized the opportunity to provide a platform to discuss challenges, changes, capacities, and capabilities of the higher education institution to ensure that graduates can cope with Industry 4.0 and survive through the different ball games in the industry.

Taiwan's Higher Education Institutions faced significant local and international challenges in the past decade, from pushing the universities to higher world rankings to dealing with declining students. (Ching, 2021) One significant change observed was the establishment of Institutional Review Boards, Research Committees, and Institutional Research (IR) Centers, with 25 IR Centers reported in 2015. In line with the country's reported number of IR Centers, the Taiwan Association for Institutional Research (TAIR) was established in 2016 to support IR activities in Taiwan and provide resources to the IR Centers (TAIR, n.d.) Worth mentioning that Taiwan is the only country in the east listed as the Affiliated Organisation for the Association of Institutional Research (AIR), after SEAAIR (AIR, Affiliated Organizations, n.d.) Therefore, it is observable that after a few years of its establishment, the 19th Annual SEAAIR Conference provided an opportunity for the country to start discussing "Transforming Intelligence into Action in IR" and learning from other members in Institutional Research.

The COVID-19 Pandemic hit the world in 2020, and country borders were closed to contain the virus to stop the outbreak. Hence, the 20th Annual SEAAIR Conference, which was supposed to be held in Malaysia, was postponed. The condition improved in 2021, but most of the country's borders were still not ready to be opened. The SEAAIR Executive Committee decided that a Virtual Conference would be organized to maintain the continuity of the Annual SEAAIR Conference. The idea of Diversity in Education was adopted as the SEAAIR Executive Committee felt that diversity is the keyword for changes to be made in institutions to address the effects brought by this Pandemic. The two-day virtual Conference was then organized to address the diversity in Instructional Research, Quality Management, and Teaching and Learning, sharing the best practices that the researchers in the region presented.

Conference Subthemes

Subthemes are topics that further elaborate on the conference theme specifically. The subthemes for Annual SEAAIR Conferences range from three to six, with most of the conferences addressing five subthemes (12 conferences in total). Conferences in 2005 had three subthemes, while those of 2009 were held with four. On the other hand, the Annual SEAAIR Conferences 2011 and 2016 in Thailand were held with six subthemes.

In the current analyses, a total of 79 subthemes were extracted from 15 conferences that were held from 2005 to 2021. These conferences are analyzed based on eight categories. The group of criteria, Institutional Research and Development, Quality Assurance and Management, and Teaching and Learning are the core objectives of SEAAIR. On the other hand, Educational Technology, Society and Culture, Education Sustainability, Creativity and Education, and Education and Industry are the second group of criteria that assist in better elaborating the conference theme. Ideally, all SEAAIR conferences must have the first category's subthemes to reflect the core business of SEAAIR. Table 3 illustrates the conference subthemes of Annual SEAAIR Conferences from 2005 to 2021.

Table 3: Conference subthemes of Annual SEAAIR Conferences from 2005 to 2021.

Year	Subtheme	Total Number of Papers	Number of papers	Institutional Research and Development	Quality Assurance and Management	Teaching and Learning	Education Technology	Society and Culture	Education Sustainability	Creativity and Education	Education and Industry
2005	Strategy and Policy Analysis	N/A		x							
	Quality Enhancement and Higher Education Management				x						
	Technology for Education and Teaching Learning					x					
2006	ICT in Higher Education	N/A					x				
	Higher Education Management				x						
	Quality and Continuous Improvement in Higher Education				x						
	Case Studies and Success Stories					x					
	Institutional Research			x							
2007	Institutional Research	52	15	x							
	Total Quality Assurance		5		x						
	Institutional Resources Based on Sufficiency and Sustainability		4						x		
	Teaching and Learning Mechanisms		18			x					
	Higher Education Management Practices Towards Sufficiency and Sustainability		10		x				x		
2008	Capacity building through Quality Assurance and Quality Management	85	17		x						
	Institutional Research in Higher Education Capacity Building		17	x							
	Managing and Sustaining Higher Education Competitive Advantage		19						x		
	Learning and Teaching to Enhance Institutional Capacity		25			x					
	Industrial Network to Support Higher Education Competitive Advantage		7								x
2009	Visioning for Excellence in Higher Education	63	10		x						
	Alternative Learning Environments for Future Learners		28			x					
	Impacts of Quality on Future Higher Education Practices		11		x						
	Institutional Research and the Growth of Higher Education		14	x							
2010	Strengthening Strategic Alliances for Academic Sustainability and Competitiveness	49	8						x		
	Transforming the Global-ASEAN Culture, Capability and Capacity of Higher Education and Research Strategic Alliances		12	x				x			
	Technology and Transformation of Teaching, Learning, and Research Paradigms in Knowledge-Based Economy		8			x					
	Experiences, Learning, and Sharing from Global, Regional, and Intra-regional Collaborations		12	x							
	Quality and Institutional Research Capabilities in Higher Education		9		x						
2011	Academic Endeavors and Excellences	74	17		x						
	IR Responses and Responsibilities		10	x							
	Educational and Technological Advances and Applications		15			x	x				
	Institutional Capacities and Capabilities		20	x							
	Quality Tenacity and Tanets		3		x						
	New, Creative, Innovative and Esoteric Initiatives		9			x				x	
2012	Institutional Research in World-Class higher education	N/A		x							
	Innovation Capabilities in World-Class higher education									x	

Year	Subtheme	Total Number of Papers	Number of papers	Institutional Research and Development	Quality Assurance and Management	Teaching and Learning	Education Technology	Society and Culture	Education Sustainability	Creativity and Education	Education and Industry
	Teaching and Learning Scholarship in World-Class higher education					x					
	Best Practices and Benchmarking World-Class higher education				x						
	Culture in World-Class higher education							x			
2013	Transforming Institutional Planning and Strategic Management	66	13	x							
	Enhancing Teaching and Scholarly Activities		24			x					
	Practicing Institutional Effectiveness: Theory, Techniques, and Technologies		8				x				
	Assessing Student Learning Outcomes and Program Quality		8		x						
	Exploring Entrepreneurship and Institutional Effectiveness		13	x							x
2014	Development Education Models for AEC 2015	54	11	x							
	Cross-Culturalization of Higher Education Institutions in AEC		6	x				x			
	Leading-Edge Strategies and Practical Solutions to Education Quality		17							x	
	Contemporary Problems in Education: Exploring the AEC Boundaries		6			x					
	Education and Authentic Human Development for AEC		14		x						
2015	Managing Internationalisation and Inclusivity of teaching and learning toward students' success	55	20			x					
	Achieving Internationalisation and Inclusivity through teaching technologies		5				x				
	Improvement of institutional and academic quality through Internationalisation and Inclusivity		13		x						
	Realizing Internationalisation and Inclusivity through Institutional Research		3	x							
	Accomplishing Internationalisation and Inclusivity through effective institutional management		14		x						
2016	Executing Teaching and Learning Engagement	62	19			x					
	Institutionalizing academic and social engagement		16	x				x			
	Empowering Technologies for Academic and Social Engagement		5				x	x			
	Discovering Institutional Research in Examining Academic and Social Engagement		13	x				x			
	Augmenting Quality Practice to Ensure Academic and Social Engagement		5		x			x			
	Enhancing Social Engagement through Service Learning		4					x			
2017	Investigating the Revolution of Educational Models, Policies, and Practices: New Magnitudes	46	12	x							
	Applying the Innovative Teaching, Learning, Assessment Techniques, and Technologies: New Scales		13			x				x	
	Implementing the Rigorous Academic Curricula: New Perspectives		3		x						
	Enhancing the Institutional Effectiveness and Academic Quality: New Dimensions		13		x						
	Re-focusing the Student Experience and Engagement: New Enrichments		5			x					
2018	Competency and Employability as the Focus of Teaching and Learning	39	9			x					

Year	Subtheme	Total Number of Papers	Number of papers	Institutional Research and Development	Quality Assurance and Management	Teaching and Learning	Education Technology	Society and Culture	Education Sustainability	Creativity and Education	Education and Industry
	Technology as an Enabler of Teaching and Learning		9			x	x				
	Quality Assurance of Students' Capacity and Capabilities		6		x						
	Institutional Management of Students' Efficacies and Effectiveness		10	x							
	ASEAN and Institutional Agenda for Students' Integration and Mobility		5	x							
2019	Quality Assurance: Practices, Impacts, and Outcomes	67	18		x						
	Advanced Technology and IR Application: Social Networks, Data Warehousing, and Data Collection		6				x				
	Institutional Governance: Enrolment, Social Mobility, and Higher Education Accountability		14	x							
	Teaching Dimensions and Possibilities: Innovations, Performance, and Assessment		27			x					
	Research Institutionalisation: System, Dissemination, and Utilisation		2	x							
2021	Teaching, Learning, and Quality Assurance	39	19		x	x					
	Education Governance, Culture, and Values		15	x				x			
	Inclusive and Multidisciplinary Curriculum		2		x				x		
	Educational Technology and Innovation		2				x			x	
	National Education Agenda		1	x	x						

Not surprisingly, all conferences address the first group of the criteria and ensure that the conference subtheme not only align with the Conference's theme but is also in line with the direction and core values of Institutional Research. This is also depicted in Figure 3, where the highest the first three criteria represent the highest occurrence of the analyses. The design of the conference theme and subthemes results from the discussion between the host university's Local Organising Committee (LOC) and the SEAAIR Executive Committee. Hence, conferences must set the theme based on the needs of the university or country and adhere to the direction of SEAAIR.

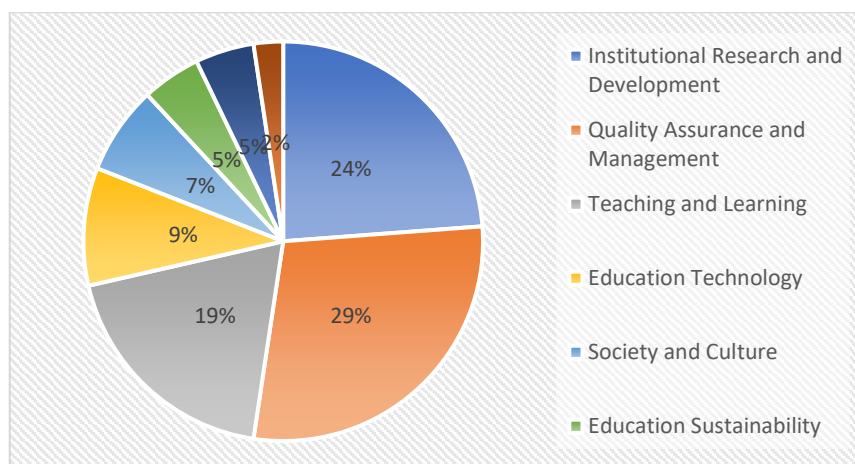


Figure 3: Distribution of the measurement criteria for Annual SEAAIR Conference Subthemes.

Education Technology creates, uses, and manages technological resources and processes to facilitate learning (Robinson, Molenda, & Rezabek, 2008). The institutions of higher learning have changed from using just overhead projectors in the early days to using various technologies such as computers, projectors, smart boards, or even virtual meeting environments. Hence, the importance of understanding and applying education technology has become one of the topics that need to be addressed by universities. This criterion has been ticked in conferences from 2015 – 2021 continuously.

Some of the subthemes address more criteria. For instance, "Empowering Technologies for Academic and Social Engagement" 2016 covers Education Technology and Society and Culture criteria. For example, Thailand suggested subthemes crossing two criteria in their four times of conference hosting. The subthemes combined one criterion from the SEAAIR core objectives and another from the other group. Such a combination led the delegates to focus on the main business and expand the research area to complement the core business. The university also invites a more diverse discussion through the subtheme, leading to the potential multidisciplinary research collaboration.

The subtheme of the 21st Annual SEAAIR Conference presented a different way of categorization, which may be due to its main theme, which relates to diversity. Hence, the subtheme was designed to include as many criteria as possible. Two criteria cover each of the subthemes. For instance, "Teaching, Learning, and Quality Assurance" covers both criteria of "Quality Assurance and Management" and "Teaching and Learning". Such an arrangement allows the coverage of more topics within the comfortable number of subthemes of the Conference.

Conference Papers Analyses

Analyses of Paper Submission Based on Country

The annual SEAAIR Conference received submissions and presentations of papers from 29 countries across the world's five continents. 751 papers were collected from 13 proceedings (2007 – 2021), with analyses of subthemes, authors, countries, and keywords performed on these papers. Figure 4 illustrates the word cloud of the submission number based on the 751 papers. The Philippines is the leading submission country, contributing 278 conference papers. Furthermore, it is not surprising to observe the top four countries with the highest submission of conference papers are the Philippines (37.02%), Thailand (16.11%), Malaysia (14.78%), and Indonesia (14.65%). The full spectrum analysis of the paper submitted by countries is depicted in Figure 5.



Figure 4: The word cloud shows the frequency of the countries based on 751 papers submitted from 29 countries.

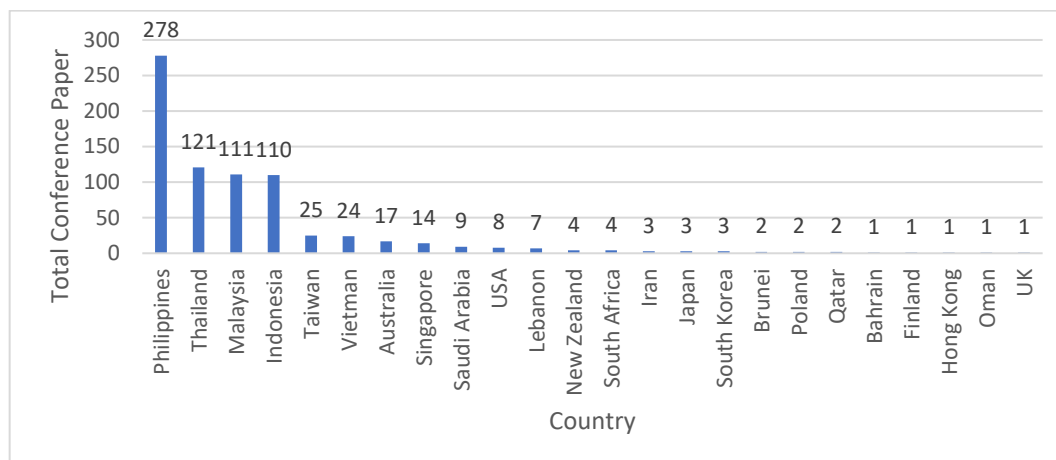


Figure 5: The total number of conference papers submitted based on the country

Looking in detail at the submission trend from Indonesia, Malaysia, the Philippines, and Thailand, the four countries have been the main contributors to the conference papers, with a contribution rate as high as 95.9% in 2011 and averaging 82.2% of the contribution per Conference. Figure 6 illustrates the moving paper contribution rate for the above four countries.

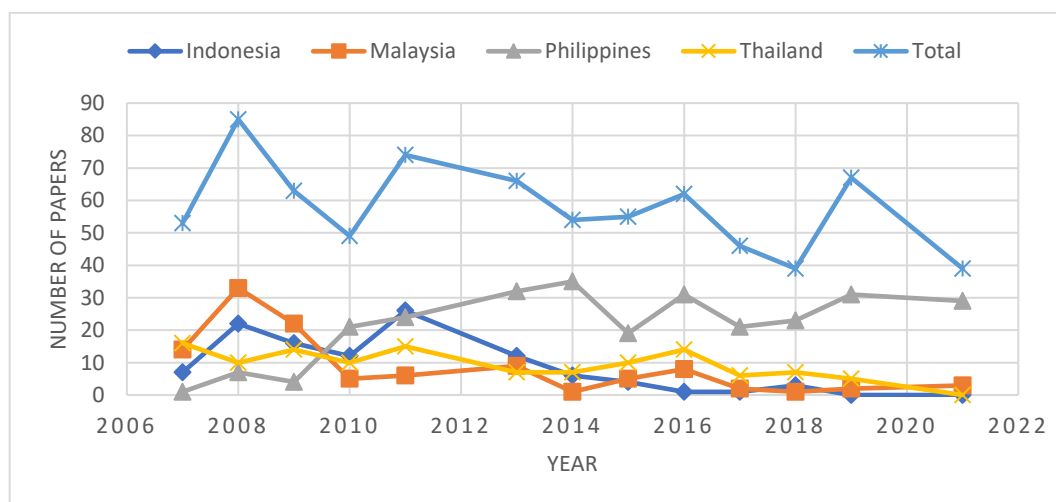


Figure 6: Number of papers submitted by Indonesia, Malaysia, the Philippines, and Thailand concerning the total submission from 2007 to 2021.

Of the four countries, Malaysia showed the most significant decrease in the submitted paper at the Conference. The submission of conference papers dropped from 33 in 2008 to 1 in 2018. This would partly be because the universities in the country started to recognize the paper published in the Scopus- or Web-of-Science-Indexed proceedings. This observation agrees with the data presented by (Purnell, 2021), where the number of publications in the Scopus and Web of Science showed a 200% increase from 2008 to 2014.

Further comparing Figure 6 and Table 2 to analyze the number of submissions based on the host country, the results show no obvious pattern to show that any host country would bring in more participation. For instance, the Conference held in Singapore in 2017 may have the lowest

participation as Singapore is rated as having the highest cost of living in Southeast Asia (Tan, 2022). Furthermore, a low participation rate would be assumed with the high currency exchange rate. Notwithstanding the high traveling cost, Singapore ranked 11 out of 13 proceedings analyzed, with 46 papers submitted – just three papers less than the Philippines in 2010 (49 papers). On the other hand, Indonesia brought the highest submission rate of 85 in 2008, then 66 in 2013, and registered the lowest submission rate in 2028 with only 39 paper submissions.

Analyses of Paper Submission Based on Authorship

Figure 7 illustrates the distribution of the paper submitted based on the number of authors per paper. One or two authors authored about two-thirds of the submission. At the same time, 84 papers with more than three authors contributed 11% of the submission.

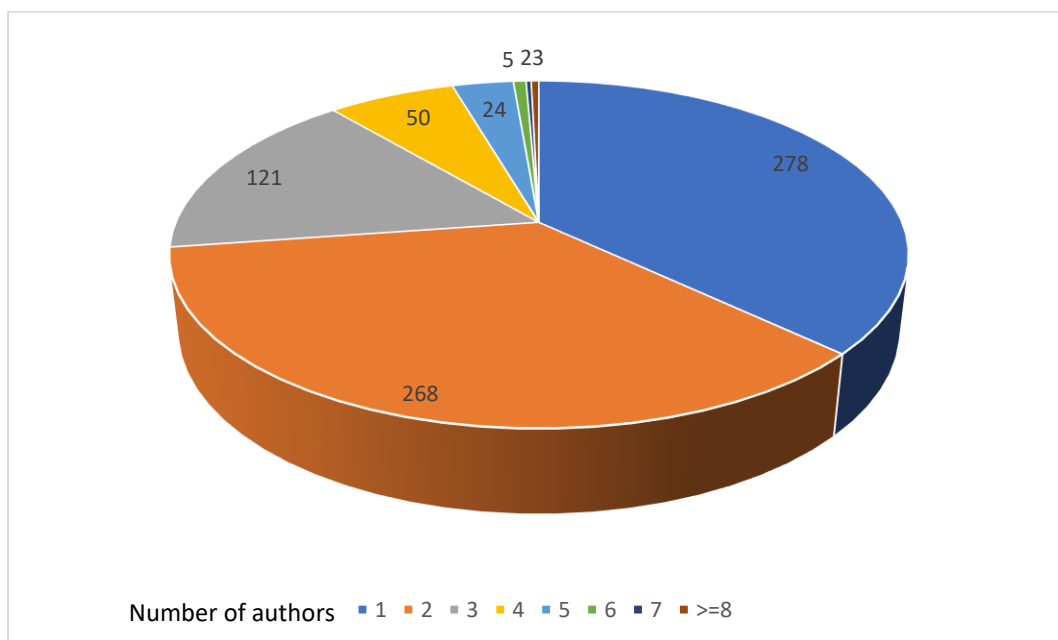


Figure 7: Distribution of the paper submitted based on the number of authors per paper

Breaking down the submission regarding the conference year, as shown in Figure 8, although single-authored papers contributed to 37% of the total conference paper, the single-authored submission was a downhill trend. As expected, the increasing trend of multiple authors, especially three or more authors, was shown throughout the years. As the university focused more on academic research outputs, academic collaboration was observed among academics to produce a publication. This, in turn, gives a higher volume of publications per year per academic reflected in the academic portfolio.

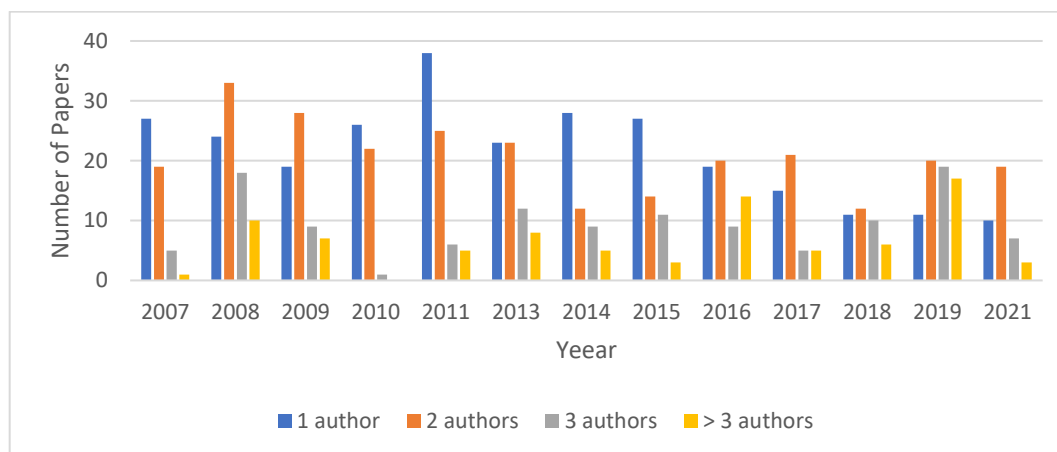


Figure 8: Number of paper submissions based on number of authors from 2007 to 2021.

Based on the Vancouver criteria, authorship guidelines published by (ICMJE, 2022), authorship credit is recommended based on the following four criteria: "Substantial contributions to the conception and design, or analysis and interpretation of data; drafting the article or revising it critically for important intellectual content; final approval of the version to be published; agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved". Although the guidelines were initially drafted for medical research, (Pruschak, 2021) showed that the guidelines were also applicable to social sciences research.

Further analyses of the 84 papers submitted with more than three authors show that papers are mainly submitted from 11 out of the 29 countries, as shown in Figure 9. The four countries with the highest number of collaborations of more than three authors were the Philippines (23 papers), Taiwan (13 papers), Malaysia (14 papers), and Thailand (11 papers). There were three papers authored by eight or more, which were published in 2013 (14 authors), 2016 (11 authors), and 2021 (8 authors).

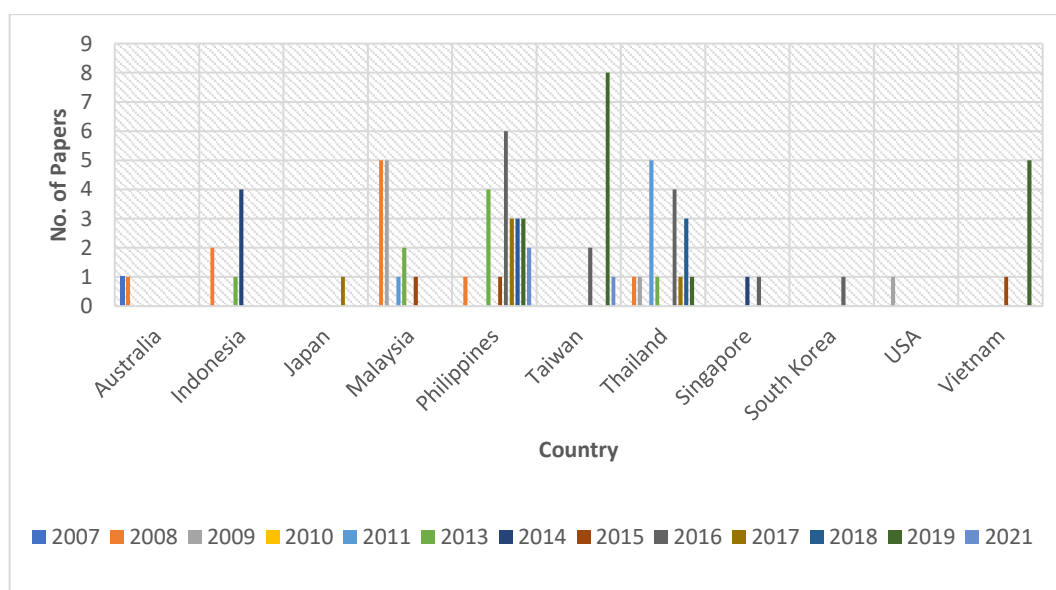


Figure 9: Countries with papers with four or more authors

To ensure that all authors' contributions in a paper are substantial and recognizable, the SEAAIR Annual Conference 2022 published a new rule to limit the full authorship for each paper to three. For a paper with more than three authors, the correspondence author needs to inform the Technical Chair to justify the contribution of all authors and seek approval from the Technical Chair. This move is said to be implemented in line with the Vancouver criteria.

Analyses of Paper Submission Based on Conference Subthemes

Earlier in Table 3, the subthemes with the respective categorization were presented. Table 4 below shows the categories of the subthemes based on the number of papers submitted by the countries. Some subthemes may cover more than categories; hence, the total number presented in Table 4 is more than the total number of papers examined in the proceedings, that is, 751. The first three categories are the primary research areas of the institutions. As expected, they have the highest number of papers covered by the countries. The following five categories are the secondary research areas that developed based on the theme and direction of the Conference. The numbers of papers presented in these categories are relatively lesser.

Table 4: Categories of subthemes based on the number of papers submitted by countries

	Institutional Research and Development	Quality Assurance and Management	Teaching and Learning	Education Technology	Society and Culture	Education Sustainability	Creativity and Education	Education and Industry
Australia	4	8	4	1		1	1	
Bahrain			1					
Brunei			2					
China								
Finland		1						
Hong Kong								1
Indonesia	36	23	24	3	5	8	4	6
Iran		3						
Japan		1		1				
Lebanon	1	1	1	1	1		1	1
Malaysia	26	23	46	4	3	10		3
New Zealand		2	1			1		
Oman		1						
Philippines	70	78	74	22	28	6	16	5
Poland		1						
Qatar		1	1					
Saudi Arabia	4	2	4		1			
Singapore	1	3	8	1				
South Africa	1		2					
South Korea		2			1			
Taiwan	8	5	7	4	3			
Thailand	30	23	34	12	10	10	3	2
UK						1		
USA	3	3	1					
Vietnam	3	14	7		1			

popular keyword as many researchers presented research based on a survey done on a pool of respondents.

Table 5: Top Ten Keywords of Annual SEAAIR Conference Proceedings

Keyword	Occurrence
Higher Education	75
Perceptions	24
Institutional Research	18
Academic Performance	17
Quality Assurance	14
Training	12
Undergraduate	12
Information and Communication Technology	11
Satisfaction	10
University Social Responsibility	10

SEAAIR focuses on the improved understanding, planning, and operations of post-secondary education institutions. Furthermore, SEAAIR also encourages the application of appropriate methodologies and techniques from many disciplines and comparative research into national higher education systems in Southeast Asia (SEAAIR, n.d.) The keywords fit not only the conference theme and subthemes but also the direction of the SEAAIR.

Some common keywords are combined with other words to provide a group of keywords addressing the same area. Table 6 shows the top ten keyword combinations of the Annual SEAAIR Conference Proceedings.

Table 6: Top ten Keywords combinations of Annual SEAAIR Conference Proceedings

Keyword	Occurrence
Student Student Employability, Student Attrition, student-centered Learning, Student Challenges, Student Confidence, Student Development Programme, Student Engagement, Student Interest, Student Leaders, Student Learning Outcomes, Student Life Cycle, Student Organisations, Student Performance, Student Retention, Student Satisfaction, Student Services, Student Teachers, Student Transition, Student Unions, Students' Attitude, Students' Difficulty, Students' Involvement	84
Learning Learning Achievement, Learning Activities, Learning and Teaching, Learning Approaches, Learning Commitment, Learning Difficulty, Learning Engagements, Learning Management, Learning Management System, Motivation, Learning Organisation, Learning Outcomes, Learning Styles, Learning Technologies, Learning Theories,	60

Academic Academic Performance, Academic Programme, Academic Programme, Academic Quality, Academic Services, Academic Staff, Academic Successes, Academic writing	44
Teaching Teaching and Learning, Teaching and Research, Teaching Anxiety, Teaching Competencies, Teaching Curriculum, Teaching Effectiveness, Teaching English, Teaching Learning Process, Teaching Methods, Teaching Practice, Teaching Quality, Teaching Reading, Teaching Standards	41
Entrepreneur, Entrepreneurship, Entrepreneurial Entrepreneur, Entrepreneurial Attitudes, Entrepreneurial Capital, Entrepreneurial Institution, Entrepreneurial Journey, Entrepreneurial Project, Entrepreneurial Risk-Taking, Entrepreneurial Models, Entrepreneurial Training, Entrepreneurship Activities, Entrepreneurship Learning, Entrepreneurship Program, Entrepreneurship Teaching	40
Quality Quality, Quality Analysis, Quality Assurance, Quality Education, Quality Instruction, Quality Legacy, Quality Management, Quality Management System. Quality Mentoring, Quality Research, Quality Teaching	32
Information Information, Information Competency, Information Literacy, Information Management, Information System, Information System Model, Information Technology, Information Technology Knowledge	31
University University Admissions, University Governance, University Lecturers, University Personnel, University Services, University Social Responsibility, University Stakeholders, University Students,	27
International, Internationalisation International Competitiveness, International Cooperation, International Higher Education, International Linkages, International Programme, International Students, Internationalisation Approaches, Internationalisation Motives, Internationalisation of Education, Internationalisation Processes	26
Education, Educational Education, Education 4.0, Education Effect, Education Management, Education Students, Educational, Educational Media, Educational Quality Mentoring, Educational System, Educational Quality Assurance	22

The keyword combination is viewed as authors aligning the research paper to the theme and subthemes of the Conference. For example, "Entrepreneurship" arises from the Conference in 2013, where the theme and subthemes focused on Entrepreneurship in Higher Education. Another example is the keyword combination of "Internationalisation". This combination arose

from the 2015 conference, which addressed the internationalization and inclusivity of higher education.

Discussion

In the ASEAN Context, the Conference leaves its presence in six out of ten ASEAN member countries. Four universities are listed in the Times Higher Education (THE, 2022), while only two were listed in QS World University Rankings (QS, 2022). This lays the potential barrier for SEAAIR's venture into the Bruneian university and promoting Institutional Research in the country. The fresh market in Brunei may also be seen as a potential opportunity for future SEAAIR conferences to be organized in Brunei and have the Bruneian culture introduced to the world. On the contrary, Cambodia, Laos, and Myanmar are relatively less developed or low-income countries (World Population Review, 2022), so institutional research or conference hosting may not be the university's priority. Therefore, SEAAIR may consider connecting with Brunei to create awareness in Cambodia, Laos, and Myanmar. Such establishment may be achieved through the publicity of the current members and the call for conference notification sent to the universities.

Based on the analyses performed on the themes, the host country designs the conference theme based on the local development related to government policies, socio-economy development, or future planning. Table 7 describes the highlight or keywords of the conference themes based on the observation of themes for conferences held from 2003 to 2021.

Table 7: Conference theme keywords/highlights for Annual SEAAIR Conferences 2003 – 2021, categorized by countries.

Country	Keywords / Highlights
China, Indonesia	Entrepreneurship
Malaysia, Thailand	Education Quality, Education Sustainability
Philippines	ASEAN Movements
Vietnam	Internalisations, Inclusions
Singapore, Taiwan	Implementation, Actions, and Challenges

Such categorization may provide a guideline for the host universities to understand the trend created from the past conferences and how they may design their themes based on the modern nation development and the direction of the host university.

SEAAIR's core research area is based on the three main pillars: Institutional Research and Development, Quality Assurance and Management, and Teaching and Learning for post-secondary education. The host university needs to ensure that the Conference's subthemes are closely tied to these three pillars so that researchers will address these research areas, leading to knowledge sharing and further strengthening the foundation of Institutional Research in the region. From the current analyses of 16 conferences, the subthemes not only complement the main theme and covers SEAAIR's main research pillars but also suggest additional topics that may be of the host university to elaborate the conference theme further.

Of the 15 conferences, three-quarters of the conferences proposed five subthemes to complement the main theme. The number of subthemes covers all necessary topics and does

not leave researchers with too many confusing choices of topics. When the Conference is organized with too many subthemes, the host university may face an issue of a low volume of submissions in certain subthemes, leading to the subtheme not being able to be well addressed through the research outputs.

82.56% of the conference papers were submitted from Indonesia, Malaysia, the Philippines, and Thailand. A decreasing trend was observed in Indonesia and Malaysia, while the Philippines showed increased submissions. The first submission from Taiwan was in 2016, coinciding with the establishment of TAIR (TAIR, n.d.) Since then, the paper from Taiwan has increased, leading to the hosting of the Conference in 2019. With the close relationship between SEAAIR and TAIR, a predicted positive increment in Taiwanese papers should be observed.

An interesting trend was observed when the paper submissions were analyzed based on the continent or geopolitical region. In the earlier years, balanced submissions were seen from all continents and geopolitical regions. However, the submissions from Europe, the Middle East, and America stopped from 2015 onwards. On the other hand, 2016 marked the first submissions from East Asia, and submission from the region was observed every year. As universities try to increase their ranking, academics are more selective in publishing journals and conferences. As a result, indexed conference proceedings became one of the considerations for publication. The conference proceedings indexed in the Conference Proceedings Citation Index of Scopus or Web of Science are strongly recommended to increase participation.

Single-authored papers contributed to one-third of the total Conference analyzed. This means that the other two-thirds of the papers were multiple-authored papers, with 27% of the papers authored by three or more authors. Given the increase of multiple-authored papers published at the Conference, it is recommendable for the Conference organizing committee to introduce authorship guidelines that incorporate the Vancouver criteria to recognize the equal contribution of all authors. Higher education institutes or research institutions must emphasize academics' hiring and promotion processes to ensure justifiable authorship in conferences and journals, as publication counts are also drafted based on the Vancouver criteria.

Conclusion and Future Works

This paper discussed the conference themes and subthemes of the Annual SEAAIR Conferences from 2001 to 2021. The analyses revealed the relatedness of the conference theme based on the country's contemporary educational or socio-economic development, which can be categorized based on the host country and the essential key phrases. Most conferences have five subthemes to support the conference themes, providing a clear guideline to the researchers to gear their research output in line with the conference theme. In two decades, SEAAIR engaged six out of ten ASEAN countries in hosting the conferences and extended their connection to China and Taiwan to fly the flag of SEAAIR in other Asia countries.

From 2007 to 2021, the Annual SEAAIR Conference received 751 conference papers from 29 countries. Indonesia, Malaysia, the Philippines, and Thailand showed the highest participation, contributing more than 80% of the conference papers. Although a negative increment in paper submission was observed in Western countries, a positive increment was seen in East Asia in almost the same period. The annual SEAAIR Conference should index the conference proceeding in either Web of Science or Scopus to boost the participation rate further. On top of that, the Conference also received an increased number of papers with multiple authors. Such a trend of increment suggests it is a good time for the Conference organizing committee to provide an authorship guideline concerning the Vancouver criteria. As such, the ethical, equal

contribution from the paper's authors is recognized, leading to a higher quality of the conference proceedings.

The keywords in a research paper help others locate similar papers within their research scope. Keywords presented in the conference paper showed their relatedness, recency, and appropriateness according to the theme and subthemes. The keywords also demonstrated that the authors of the conference papers understood and appreciated the vision and missions of SEAAIR, contributing their idea to the development of Institutional Research in the region.

This research work can be expanded in a few areas. With the ongoing Conference, the analyses will be expanded to the following years to observe the trend of submission from the countries, especially the return of the Middle East, America, and Europe, and the increase of East Asia submissions. Similar research is also expandable to the detailed analyses of JIRSEA or other Institutional Research journals and conference proceedings to analyze the trend and direction of the paper submissions.

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