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IMPLEMENTING SCORECARDS AND DASHBOARDS FOR MONITORING AND EVALUATING INTERNATIONALIZATION IN HEIs: A CONCEPTUAL PAPER

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ABSTRACT

This study aims to explore the implementation of scorecards and dashboards in assessing internationalization activities in universities. The methodology of this concept paper is referencing secondary data comprising established academic databases from Scopus, Web of Science (WOS), and Google Scholar, focusing on aspects related to the benefits, monitoring, and effectiveness of scorecards and dashboards in evaluating an internationalization process or activity carried out by a university. The improvement of a university's reputation and ranking should be based on several key factors such as academic reputation, employer reputation, faculty/student ratio, citations per faculty, international faculty ratio, and international student ratio. These are the same criteria considered by institutions such as Quacquarelli Symonds (QS) and Times Higher Education (THE), which rank and rate universities and institutions of higher education around the world. This study found that implementing scorecards and dashboards in evaluating a university to improve its reputation and ranking is indeed effective. This is due to various factors, including the benefits, effectiveness, and accurate measurement offered by the scorecards and dashboards and their widespread use in universities.

Keywords: Evaluation, Effectiveness, Internationalization, Scorecard, Dashboard

Introduction

The higher education sector today is no longer focusing solely on classroom education. This sector has changed its focus towards a different dimension, specifically the process of internationalization and globalization. Globalization has had positive effects in this era, such as the growth of franchise activities, articulation programs, branch campuses, and online delivery of higher education (de Wit, 2020). The global village concept applies in this scenario as knowledge, cultures, and people are shared across borders, and geographical location becomes less important than the quality of ideas and ability to contribute to the global intellectual dialogue. Moreover, it facilitates a global university network where students, faculty, and ideas flow freely between institutions, regardless of physical location. Each research university is part of a single global network. As a result, internationalization has become a major strategic priority for academic leaders of higher education institutions who want to internationalize their institutions and connect their organizations, students, and faculty to an accelerating world (Mohsin & Zaman, 2014).

The internationalization of universities has several benefits, including increased awareness of the global context. Engaging students in an international context enhances their understanding of global affairs and difficulties from multiple viewpoints (Buckner, 2019). It facilitates academic standards by exchanging different practices from various countries and cultures. There is an opportunity for universities to improve the quality of academics by learning from other universities around the world and sharing their best practices (Jibeen & Khan, 2015). Last but not least, cultural exchange and understanding are promoted because an internationalized university environment fosters cultural awareness, an international perspective, and tolerance among the students. This fosters such values as tolerance, respect, and an ethical obligation to the world (Singh, 2021).

The Internet has dramatically facilitated this, as digital communication technologies and trends drive the focus toward international cooperation in research and education (Umpleby et al., 2009). However, it should be noted that globalization is a dynamic phenomenon that is influenced by region, language of use, and academic culture. Different types of institutions within an interconnected global system play it out differently, where each university is visible to the other. In this light, as the impact of the worldwide dimension grows, it becomes impossible for nations or even individual institutions of higher education to be completely isolated from the global influence.

The internationalization of higher education institutions has become increasingly important in a globalized world. However, measuring the effectiveness of internationalization activities in universities remains a complex and challenging task. Despite the numerous efforts and projects that have been implemented to assess internationalization, such as the "CeQuInt Project" of the European Consortium for Accreditation, which created a framework for assessing internationalization at the program and institutional levels (Gao, 2019) and the IMPI Project, which was supported by the European Union and offers a set of indicators that institutions can use to evaluate their performance in internationalization (Green, 2012). Hence, scorecards and dashboards are found to be very useful for evaluating the success and outcome of internationalization in universities as they have several advantages over other tools. They allow users to sort, drill down, search, analyze, and visualize the most critical metrics for

internationalization KPIs, which converts data into an easily understandable and engaging format (Team, 2024). They also assist in detecting changes or problems since users can compare the most important internationalization KPIs side by side and see which ones are on track, which ones are not, and which ones need further investigation. Therefore, there is a clear need to see how effective and appropriate the dashboard and Scorecard are in assessing internationalization activities based on indicators from (QS) and (THE) in improving the university's achievement, ranking, and reputation.

Literature Review

Internationalization of the Universities

The terminology "internationalization" is not novel; nonetheless, its incorporation within the realm of education is a recent development. Delving into the epoch before the 1980s, it becomes palpable that the terminology of "international education" held a more prevalent sway. This predilection maintains its grip even in contemporary times, with the United States of America as a prominent bastion of this nomenclatural inclination (De Wit, 2002: 104; Knight, 2004: 2 in Chan & Dimmock, 2008). According to Knight (2003), internationalization incorporates a global, intercultural, or international component into higher educational institutions' goals, duties, or delivery modes. While Liu (2004) states in Hou (2022) that the concept of education should advocate a decisive rejuvenation of the educational paradigm, this recalibration encompasses multiple facets: a call for a contemporary overhaul of educational constructs, a determined effort to improve academic skills, an unabashed embrace of an open-ended pedagogical approach, and a visionary quest for the collective dissemination of educational reserves.

According to Kirkwood and Price (2013), internationalization in higher education systematically integrates an international perspective into the institution's teaching, research, and public service activities. The internationalization of higher education entails giving university instruction, research, and services an international and intercultural perspective (Mia et al., 2022). However, by the year 2014, the meaning of internationalization was quite different from what it used to be. Pukall and Calabro (2014) defined internationalization as a process that is characterized by the existence of state and change variables that are in a constant process of interacting with each other. This perspective recognized the dynamic nature of internationalization and the fact that institutions had to be ready to respond to changes in the global environment. The idea was then taken a step further in the mid-2010s when de Wit et al. (2015) and Hudzik (2015) called for the internationalization of higher education to be all-encompassing. This concept went further than mere integration; it included the improvement of education standards and the positive impact on society. Liu and Ko (2017) extended the argument by concentrating on the organizational use of global economic resources, which can be seen as a shift to the economic perspective of internationalization in addition to the educational perspective.

Since 2018, the concept of internationalization has been considered as a complex and a multilateral process. Crăciun (2018) pointed out that internationalization is a multidimensional process, while Hiroshi (2018) stressed the need for participation in decision-making processes at different levels. Knight and de Wit (2018) defined internationalization as a complex concept that includes various purposes, methods, and

activities that can be applied to various and constantly evolving environments. In this period, internationalization is not only a process of improvement of education but also a process of creating international awareness and international goodwill. Concepts like study abroad, cultural fairs, and international students' associations have become essential in fostering intercultural relations and eradicating prejudice (Sobkowiak 2019; Maharaja 2018; Soria & Troisi 2013). These efforts were meant to foster understanding and respect for the cultures of both the home and host countries, as well as promote cooperation between the two (Nyangau 2018).

In the most recent phase (2021-2022), the concept of internationalization has evolved into a more complex and challenging phenomenon. Chyrva et al. (2021) highlighted the engagement, devotion, and commitment required from Higher Education Institutions (HEIs) to sustain internationalization efforts. Hunter et al. (2022) and Rumbley et al. (2022) noted that internationalization is continually refined and revised, with theories and definitions adapting to new insights and evolving global circumstances.

This period suggests recognizing that internationalization is becoming a more complex and diverse process, which is viewed as a never-ending process. The emphasis is on the challenges of global interaction and the factors that affect the implementation of internationalization plans. Based on the analysis of the development of internationalization over the last decade, the following trends can be identified. The international dimension of university activities has been a priority since 2013, as universities began to promote the global and intercultural approach actively. This is supported by the view of internationalization as a process that is constantly evolving and, therefore, requires constant changes as a result of events in the global arena. There is also a more extensive concept of internationalization that has been developed and covers various aspects, from the quality of education to the contribution to society and economic capital. This view of the concept of internationalization shows that the process is complex and has numerous effects.

Therefore, culture has continued to be at the center of internationalization, with the main objective of encouraging international exchanges and cooperation between students and institutions in different countries (Sobkowiak, 2019; Maharaja, 2018; Soria & Troisi, 2013). These similarities, regardless of the changes in the concept of internationalization, show the sustained focus on the development of a diverse and interculturally sensitive academic population.

The dynamics and nature of internationalization processes have also become more complex and multifaceted, which makes the need for assessing these activities more important to determine their effectiveness and future sustainability. Since the process of internationalization is complex and comprises numerous aspects, universities must have an effective system that will help analyze their activities in the international environment. Such a need creates the prospect of talking about tools such as Scorecards and Dashboards, which are vital in this context. Due to the development of internationalization into a multifaceted and constantly changing process, it is necessary to employ a comprehensive approach to evaluate the effects of the process and its advancement. Such concern with monitoring and evaluation is important as it helps institutions assess the success of their internationalization plans. This includes

determining the strengths, weaknesses, and opportunities and considering key facts that would assist in improving engagement at the international level (Knight, 2001).

The further development of Scorecard and Dashboard tools can also be considered as a continuation of this idea. These tools offer an institutional framework for monitoring and assessing the internationalization processes to measure the progress of improvements made. In all, by implementing Scorecards and Dashboards, universities can design a sequential and reasonable structure for their internationalization processes and show that they are willing to be accountable (Gao, 2019).

Table 1: The Evolution of Internationalization Definition

Studies	Terms of Internationalization
Kirkwood and Price (2013)	Methodological integration of the international perspective into an institution's teaching, research, and service activities.
Pukall and Calabro (2014)	Dynamic process, explained by state and change variables that affect each other continuously.
de Wit et al. (2015)	Integrating an international, intercultural, or global dimension into the purpose, functions, and delivery of post-secondary education to enhance the quality of education and research for all students and staff and to contribute meaningfully to society.
Hudzik (2015)	Comprehensive internationalization
Liu and Ko (2017)	The process of organizing and using global economic resources such as capital, raw materials, labor, information, market, and management.
Crăciun (2018)	Multifaceted and multidimensional process
Hiroshi (2018)	Active engagement at various levels of decision-making
Knight and de Wit (2018)	Internationalization has become a very broad and diverse concept, encompassing new rationales, approaches, and strategies in different and ever-changing contexts.
Chyrva et al. (2021)	Engagement, devotion, and commitment to HEI
Hunter et al. (2022)	The concept of internationalization is constantly refined and revised, and theories and definitions are adapted to new and evolving insights.
Rumbley et. al. (2022)	A multifaceted and evolving phenomenon

Table 1 presents the various perspectives/studies on the definition of 'internationalization' in studies published between 2013 and 2022. It reflects the evolution of the 'internationalization' over the years.

Scorecard and Dashboard Tools

The process of internationalization in universities is complex. Hence, it has to be measured accurately in order to be successful. In this regard, scorecards and dashboards, management tools that offer a summary of the performance of an organization (Edward et al., 2011; Gao, 2019), including universities, are considered the most noteworthy internationalization tools. They include Key Performance Indicators (KPIs), faculty performance, student academic performance, and details of the activities of the university (Khawaja, 2020; Ibrahim & Tho, 2012). These tools can support better collaboration by

providing an overview of the progress on the defined internationalization KPIs, by providing each stakeholder with access to the same dashboards, and by engaging people in the discussion about the performance and identification of further improvement (Tang et al., 2019). They also allow real-time ROI analysis through tracking and evaluating the biggest internationalization KPIs in real-time and help users understand the efficiency and scale of their decisions and investments within a shorter timeframe, which results in better long-term performance (Team, 2024). In addition, the use of these tools enables universities to compare the level of internationalization with other universities across countries (Gao, 2017). In this regard, although there are other tools available, like the IMPI project discussed by Green (2012), scorecards and dashboards are a more engaging, fast-acting, and group-centered way of measuring, evaluating, and responding to the key areas of the university's internationalization activities.

According to Arputharaj et al. (2024), this coherent framework focuses on defining key objectives, setting benchmarks, and offering charts to illustrate advancements in such areas. It offers an effective overview of organizational performance, as illustrated by a case study. Moreover, this methodology can be used to assess the effectiveness of a university's internationalization process, and authors have used scorecards and dashboards as a way of monitoring and evaluating the effects of internationalization on universities (Shuangmiao & Zhou, 2015).

By utilizing scorecards and dashboards, universities can track key performance indicators related to their internationalization activities and make data-driven decisions to enhance their global presence and achieve their internationalization goals. According to Few (2006), the dashboard can be defined as a visual representation of the key information needed to achieve one or more goals, consolidated and arranged on a single screen so that data can be monitored at a glance. Doerfel & Ruben (2002) explained that a dashboard is "a set of financial indicators and other operational measures that reflect key elements of an organization's strategic direction and are used to "steer" the organization, much as a pilot uses the set of indicators in the cockpit to monitor and steer an aircraft. It enables managers to more effectively measure, monitor, and manage organizational performance (Muntean et al., 2010). At the same time, Kaplan & Norton (1992) describe scorecards as a tool for measuring business performance. Top managers use it to help emulate an organization's strategy and measure performance (Kopecká, 2015).

Notably, scorecards and dashboards have some critical differences in terms of their purpose and functionality. Scorecards track progress toward strategic objectives and target attainment, while dashboards are operational, monitoring, and measuring processes (Banelienè, 2021). Thus, scorecards and dashboards are often used interchangeably, so it is essential to recognize the nuances between them. Scorecards provide a high-level view of an organization's performance, focusing on key performance indicators and target attainment. In the meantime, both allow a strategic approach, helping organizations align their efforts with long-term goals (Marilyn, 2020; Rahimi et al., 2018).

Nevertheless, designing an effective scorecard for the university's internationalization activity requires careful consideration of the key performance indicators used to measure progress and success. Furthermore, KPIs should align with the university's overall strategic objectives and reflect its commitment to environmental and social perspectives.

One approach to developing a KPIs model for internationalization activities is to incorporate the principles of balanced scorecard methodology proposed by Kaplan & Norton, (1996). This methodology is divided into four perspectives: financial, customer, internal processes, and learning and growth. According to Yüksel & Coskun (2013), educational institutions have the flexibility that results in adopting four specific perspectives for the Balanced Scorecard in educational services: stakeholders, internal processes, learning and growth, and financial sustainability. The dashboard should provide a clear and concise overview of key performance indicators related to internationalization activities. It should display real-time data and be user-friendly, allowing stakeholders to interpret and analyze the information quickly (Basavaraju, 2023). Moreover, integrating scenario analysis capabilities in performance dashboards enables universities to explore potential outcomes and make informed decisions regarding their internationalization strategies.

Thus, the scorecards and dashboards can play an essential role in the process of internationalization of universities as they provide an instrument for evaluation of the progress in the internationalization agendas. These tools help universities define where to focus and set achievable goals to improve from time to time.

Methodology

In the context of the global higher education environment, the assessment of international activities at colleges and universities is growingly important. Thus, scorecards and dashboards become useful means to evaluate and manage the efficiency of internationalization initiatives. To this end, a secondary data analysis approach was adopted, with a focus on peer-reviewed articles that were published between 2010 and 2022. This paper adopts a narrative review approach to examine the monitoring and evaluation of internationalization activities in Higher Education Institutions (HEIs). A narrative review is a type of literature review that aims to give an understanding of the literature available on a particular topic, including a quantitative analysis of the findings as opposed to a qualitative analysis of the themes and patterns present (Shah, 2018). The study design is based on secondary research, and the data is obtained from various academic databases. This approach is useful for the evaluation of the prior works as it provides a comprehensive view of the topic.

The data will be collected from academic databases such as Scopus, Web of Science, and Google Scholar. These databases were chosen because they provide access to numerous full-text, peer-reviewed articles. The time frame selected for the analysis of the literature is from January 2010 to December 2022, thus providing a modern perspective. The data collected were analyzed thematically, a method used often in qualitative research. This included going through the compiled literature and categorizing it according to themes and keywords like "Scorecard," "Dashboard," "Internationalization," and "University". A structured data extraction form was used to extract information from the selected studies, with preference given to studies published between 2010 and 2022. From the title and abstracts, 50 articles were considered relevant and passed through the inclusion criteria.

Finally, the articles that were relevant to the implementation of scorecards and dashboards in internationalization activities of universities and the research method used, whether quantitative, qualitative, or mixed, were reviewed in full text, and 30 of them

were included in the study. This increases the reliability and consistency of the data extraction process and makes it easier to analyze the collected data.

Discussion

The Use of Scorecards and Dashboards for University Performance

Internationalization of universities is seen as necessary for universities because of the variety of benefits it is said to bring. According to Simmons (2014), there are four types of benefits of internationalizing universities. By internationalizing universities, students can deepen their understanding of global issues and their local implications and acquire skills that enable them to navigate heterogeneous environments with a variety of people. They can respect differences/different values, recognize different cultures as legitimate, and develop and manage intercultural communication skills. Certainly, such an internationalized university can attract both students and academics from all over the world (Sagara, 2014).

According to Muntean et al. (2010), universities can use dashboards to manage student, staff, department, and researcher performance by establishing metrics and managing these indicators over time through data visualization. There are several studies conducted on the implementation of dashboards in universities; Kuzilek et al. (2015) used demographic and VLE interaction data to predict at-risk students. The study developed a dashboard for displaying the course outline and summary of each student's predicted performance level, which are then emailed to the teaching team. Furthermore, no evaluation of the effectiveness of the dashboard was conducted.

Moreover, Charleer et al. (2018) implemented LISSA (Learning dashboard for Insights and Support during Study Advice) to help student advisors help their first-year students plan a more accessible course of study. Historical data and student grades were analyzed to create visualizations. The use of dashboards in the field of education in universities is quite common. Many universities around the world employ dashboards as a means to track progress based on their missions, objectives, and goals.

Furthermore, by gathering data from sources, a dashboard can provide an overview of crucial information that enables faculty members to easily and quickly access the data they need (Hora et al., 2017). Performance dashboards have proven to be tools for organizations aiming to enhance their business performance through measurement, monitoring, and management of their operations (Eckerson, 2010). These dashboards are widely used for monitoring, analysis and managerial purposes by leveraging business intelligence and data integration infrastructure (Eckerson, 2010; Muntean et al., 2010).

However, what sets this Scorecard apart from others is its combination of non-financial metrics across four perspectives (Kiriri, 2022). This approach distinguishes instruments that play a role in achieving organizational goals. Based on Işoraitès (2008), there are four perspectives to consider: customer, internal, and learning perspectives. Kaplan and Norton (1996) developed these perspectives to provide an overview of an organization's performance. By utilizing the scorecard framework, organizations can effectively balance long-term financial goals with long-term success factors while considering both internal and external influences on performance. This interconnected approach allows for an

evaluation of performance and emphasizes the importance of continuous improvement through the active participation of all employees (Camilleri, 2021).

Moreover, a scorecard can serve as a tool for measuring and tracking performance in a manner (Basuony & El Guindy, 2019). According to De Geuser et al. (2009), implementing a scorecard can enhance performance by complementing the organization's strategy implementation efforts. Additionally, using a scorecard helps align activities with goals (Madsen & Stenheim 2014).

The utilization of scorecards ensures that organizational activities are closely aligned with overarching objectives. They establish a connection between the activities and the overarching vision, ensuring that everyone is aligned toward common objectives. By adopting scorecard techniques, organizations can holistically assess their performance across dimensions, including customer satisfaction, internal processes, and growth opportunities.

The Use of Scorecards and Dashboards Helps to Measure Universities' Internationalization

Scorecards and dashboards can aid in measuring and sustaining university internationalization in several ways, including measuring and presenting internationalization KPIs. Scorecards and dashboards help universities sort, search, evaluate, and display KPIs of internationalization interactively and convert data into graphics (Tang et al. 2019). In addition, scorecards and dashboards cover all aspects of university internationalization, such as student and staff mobility, international projects and partnerships, international research, delivery of education to other countries by new forms of collaboration (transnational education), and international, intercultural, and global dimension in curriculum and learning. Internationalization as one of the third missions of universities has become more significant in the last three decades. A lot of attempts have been made to measure the effectiveness of universities in this regard. For instance, in the CeQuInt project, the European Consortium for Accreditation in Higher Education has created an assessment framework that can be applied to assessing the internationalization of a program or an institution (Gao, 2019).

This is because scorecards and dashboards can also facilitate data-driven decision-making and sustainable improvement of global engagement efforts through the definition of key performance indicators and the use of a clear framework to monitor progress (Martin & Sauvageot, 2011).). Hence, through the application of these tools, the university can assess its progress toward the achievement of its internationalization objectives, adapt the strategy when necessary, and ensure that its internationalization efforts are beneficial, meaningful, and consistent with the overarching vision of the university. This comprehensive strategy assists institutions in navigating the challenges of internationalization, improving effectiveness, and realizing the intended outcomes of internationalization strategies.

The Effectiveness of Evaluation Using Scorecard and Dashboard

Universities have increasingly recognized the importance of evaluating the impact and effectiveness of their internationalization efforts. This assessment serves purposes.

Firstly, it allows universities to gauge their progress and pinpoint areas for improvement in their activities. By understanding the impact of these endeavors, universities can determine if they are successfully achieving their goals in terms of engagement and cultural diversity (Yesufu, 2018; Iuspa, 2010). Secondly, measuring the effectiveness of internationalization activities is crucial for universities to be evaluated within the rankings. These rankings often take into account a university's commitment to internationalization and its performance in this area (Green & Ferguson, 2021; Bedenlier & Zawacki Richter, 2015).

Moreover, assessing the effectiveness of these activities can assist universities in planning for programs by evaluating outcomes and benefits generated by their international initiatives (Zartoshty, 2022). Lastly, it plays a role in shaping policies that promote and support scientific research on an international scale (Bedenlier & Zawacki Richter, 2015). Monitoring and evaluating activities undertaken by university policymakers can effectively identify the strengths and weaknesses of their support systems. This allows the allocation of resources in a way that ensures results. Furthermore, universities must measure and assess the impact of their exchange programs on a scale. Such programs have become a part of university activities. Understanding their effectiveness enables institutions to evaluate the value they bring to students. This evaluation also helps in fostering a presence and achieving academic excellence (Zartoshty, 2022; Yesufu, 2018; Iuspa, 2010).

Evaluating internationalization activities is a task that requires consideration and attention to detail. The subjective nature of internationalization poses one of the challenges in this process, as it makes determining the success of activities quite arduous. Moreover, measuring the impact of internationalization activities can be challenging as their effects may not be immediately apparent and could take time to manifest (Hudzik & Stohl 2012a). Hence, establishing concise criteria for evaluating internationalization further adds to this challenge, necessitating input from stakeholders (Yesufu, 2018).

To summarise, evaluating and measuring the performance of educational institutions is a process that involves various factors and methods. When assessing the effectiveness of universities' efforts in internationalization, we consider metrics such as teaching quality, research output, and community engagement. These metrics help us understand how well universities are achieving their internationalization goals and enhancing students' educational experiences. Additionally, factors like article citations and collaborative research partnerships highlight universities' involvement in research networks and their contributions to knowledge exchange. While renowned ranking organizations like Times Higher Education (THE) and QS use indicators to assess university performance, it is important to acknowledge that performance measurement can go beyond these metrics. The balanced scorecard approach offers a perspective by considering finance, student satisfaction, community impact, internal processes and continuous growth as metrics for evaluating higher education performance.

Aligning the performance management system (PMS) with objectives and individual goals is crucial. It emphasizes the management of resources and talent, which plays a significant role in the success of higher education institutions. As these institutions continue to adapt and evolve to meet changing landscapes and global demands, their

comprehensive evaluation and performance management systems remain vital. Whether using indicators or adopting a perspective, these systems have the potential to enhance the quality, impact, and international reputation of higher education institutions in an increasingly competitive world.

Despite these challenges, it is crucial to evaluate the effectiveness and impact of internationalization efforts on the success of an organization. By acknowledging and tackling the limitations and obstacles associated with a process, companies can devise assessment strategies that promote internationalization and contribute to long-term prosperity (Zartoshty, 2022).

Implications

Evaluating the effectiveness of scorecards and dashboards in the implementation of internationalization activities implementation at universities is of great importance and has numerous implications. Firstly, the implementation of scorecards and dashboards in the implementation of internationalization activities helps to improve accountability and transparency in universities. With accurate and comprehensive metrics and easily accessible data, along with the implementation of scorecards and dashboards, universities can foster a culture of accountability. This also helps in the appropriate allocation of resources to support global engagement initiatives and provides stakeholders with comprehensive data on the effectiveness of internationalization.

The implementation of scorecards and dashboards for internationalization activities contributes to improved decision-making processes at all levels of the university. Regular analyses and data evaluation provide decision-makers with valuable insights into the impact and results of internationalization activities. This helps them to make strategic decisions based on facts and priorities when allocating resources and making programmatic improvements.

Evaluating the effectiveness of scorecards and dashboards for internationalization activities helps with the processes of strategic planning and resource allocation at universities when it comes to assessing universities' access to quality processes. Universities can use the information and data from scorecards and dashboards to identify strengths and weaknesses in their internationalization activities, allocate resources, and set feasible targets for their global engagement.

Besides, regular assessment of internationalization activities using scorecards and dashboards can play an effective role for universities to maintain and improve quality and continuously look for ways to benefit international students in order to develop best practices. And lastly, internationalization activities can help universities to increase diversity, equity, and inclusion at universities. Research that focuses on how scorecards and dashboards are used to improve internationalization activities at universities can help universities identify ways to promote support for diversity, create an inclusive environment, and eliminate biases that are barriers for a few people to choose to go global.

Due to this, examining the applicability of scorecards and dashboards for evaluating the initiatives for internationalization at universities can have extensive consequences for its

proficiency, tactical scheduling, maintenance of quality and global competition. At the same time, the use of data and appraising tools can help universities improve their attempt at global engagement, fostering diversity and preparing students for a global and diverse world.

Recommendations

This research focuses on the conceptual method for the next research studies related to the power of applying scorecards and dashboards at university-level internationalization. Firstly, for the next studies on research, they can apply qualitative ones because these methods can explore the experiences, perceptions, and attitudes towards the use of scorecards and dashboards in internationalization activities of the universities. Methods like interviews, focus groups, case studies, etc., can provide in-depth ideas about applying scorecards and dashboards in assessing international activities. Secondly, they also can apply this research by using longitudinal studies. In this regard, they can check the effectiveness of applying scorecards and dashboards by assessing internationalization activities over time. For example, they can develop a particular timeline to evaluate internationalization activities in universities every semester. Thirdly, two representations. In order to show the effectiveness of the Scorecard, dashboards, and metrics, the researchers have to prove that these tools can assess the internationalization activities of the universities by different representations.

Conclusion

The concept of internationalization has gained significance in the field of education, prompting universities to allocate resources towards enhancing their influence. However, evaluating the effectiveness of these efforts can be challenging without measurement and evaluation tools. This is where dashboards and scorecards come into play, providing universities with insights into the impact of their internationalization initiatives. These scorecards and dashboards empower universities to make decisions when successfully implemented as they help identify areas for growth and consistently enhance the impact of their internationalization endeavors.

The insights derived from the tool's universities can help universities adapt their strategies based on changing education trends and ensure resource allocation while delivering significant value to their stakeholders. One notable advantage of employing scorecards and dashboards is that they enable universities to adjust their strategies according to the evolving landscape of education. By monitoring performance metrics and key indicators, universities can swiftly identify emerging trends. Take proactive measures to stay ahead. However, it is crucial to acknowledge that effective implementation of measurement tools requires an understanding of the university's goals, policies, and procedures. Hence, universities need to develop a system of scorecards and dashboards that aligns with their goals of internationalization and promotes a culture of making data-driven decisions. In summary, continuous enhancements in internationalization efforts are vital for universities to stay competitive in the education sector. By utilizing scorecards and dashboards, universities can monitor their progress, identify areas for improvement, and make decisions that strengthen their presence.

References

- Al-Agtash, S., & Khadra, L. (2019). Internationalization context of Arabia Higher education. *International Journal of Higher Education*, 8(2), 68. <https://doi.org/10.5430/ijhe.v8n2p68>
- Altbach, P. G., & Knight, J. (2007). The Internationalization of Higher Education: Motivations and Realities. *Journal of Studies in International Education*, 11(3–4), 290–305. <https://doi.org/10.1177/1028315307303542>
- Arputharaj, J. V., Yakub, M. E., Haruna, A. A., & Kumar, A. S. (2024). Review and design of integrated dashboard model for performance measurements. In Lecture notes in networks and systems (pp. 1–10). https://doi.org/10.1007/978-981-99-8451-0_1
- Banelienė, R. (2021). Key performance indicators: Contemporary challenges to industrial small and medium enterprises. *Proceedings of the Estonian Academy of Sciences*, 70(4), 399. <https://doi.org/10.3176/proc.2021.4.05>
- Basavaraju, G. (2023). *Storytelling: How a company dashboard narrates the tale of its successful operations*. www.linkedin.com. Retrieved September 5, 2023, from <https://www.linkedin.com/pulse/storytelling-how-company-dashboard-narrates-tale-its-basavaraju-phd/>
- Basuony, M. a. K., & El Guindy, M. N. (2019). The evolution and applications of balanced Scorecard: A comparative approach. *Mağallāt Al-Buḥūt Al-Muḥāsabiyyāt (Print)*, 6(1), 29–43. <https://doi.org/10.21608/abj.2019.126540>
- Bedenlier, S., & Zawacki-Richter, O. (2015). Internationalization of higher education and the impacts on academic faculty members. *Research in Comparative and International Education*, 10(2), 185–201. <https://doi.org/10.1177/1745499915571707>
- Billing, D. G. (2004). International comparisons and trends in external quality assurance of higher education: Commonality or diversity? *Higher Education*, 47(1), 113–137. <https://doi.org/10.1023/b:high.0000009804.31230.5e>
- Brown, C. (2012). Application of the balanced Scorecard in higher education opportunities and challenges. In *Planning for Higher Education* (pp. 40–50).
- Buckner, E. (2019). The Internationalization of Higher Education: National Interpretations of a Global Model. *Comparative Education Review*, 63(3), 315–336. <https://doi.org/10.1086/703794>
- Camilleri, M. A. (2021). Using the balanced Scorecard as a performance management tool in higher education. *Management in Education*, 35(1), 10–21. <https://doi.org/10.1177/0892020620921412>
- Chahar, B., & Hatwal, V. (2018). A study of performance management system in higher education institutions with special reference to academicians. *Journal of Emerging Technologies and Innovative Research*, 5(6), 350–353.

Chan, W. W., & Dimmock, C. (2008). The internationalization of universities. *Journal of Research in International Education*, 7(2), 184–204. <https://doi.org/10.1177/1475240908091304>

Charleer, S., Moere, A. V., Klerkx, J., Verbert, K., & De Laet, T. (2018). Learning Analytics dashboards to support Adviser-Student dialogue. *IEEE Transactions on Learning Technologies*, 11(3), 389–399. <https://doi.org/10.1109/tlt.2017.2720670>

Chyrva, A., Statsenko, O., & Kyrychenko, T. (2021). Modern State in Higher Education Internationalization at Global and Local Levels (by the Example of SSU, SNAU, SSPU. Ukraine). *Revista Romaneasca Pentru Educatie Multidimensionala*, 13(3), 508-529. <https://doi.org/10.18662/rrem/13.3/464>

Crăciun, D. (2018) National Policies for Higher Education Internationalization: A Global Comparative Perspective. In A. Curaj, L. Deca, & R. Pricopie (eds.), *European Higher Education Area: The Impact of Past and Future Policies* (pp. 95–106). Springer. http://doi.org/10.1007/978-3-319-77407-7_7

De Geuser, F., Mooraj, S., & Oyon, D. (2009). Does the Balanced Scorecard Add Value? Empirical Evidence on its Effect on Performance. *European Accounting Review*, 18(1), 93–122. <https://doi.org/10.1080/09638180802481698>

de Wit, H., Hunter, F., Howard L., & Egron-Polak, E. (Eds). (2015) *Internationalization of Higher Education*. Brussels: European Parliament, Directorate-General for Internal Policies.

de Wit, B. (2020). *Strategy: An International Perspective 7th edition* (7th Ed.). Cengage Learning EMEA.

Doerfel, M. L., & Ruben, B. D. (2002). Developing more adaptive, innovative, and interactive organizations. *New Directions for Higher Education*, 2002(118), 5–28. <https://doi.org/10.1002/he.53>

D'Souza, M. M. (2012). Performance management systems – its challenges. *International Journal of Exclusive Management Research*, 2, 11.

Eckerson, W. W. (2010). *Performance dashboards: Measuring, monitoring, and managing your business* (2nd ed.). John Wiley & Sons.

Edward, A., Kumar, B., Kakar, F., Salehi, A. S., Burnham, G., & Peters, D. H. (2011). Configuring Balanced Scorecards for Measuring Health System Performance: Evidence from 5 Years' Evaluation in Afghanistan. *PLOS Medicine*, 8(7), e1001066. <https://doi.org/10.1371/journal.pmed.1001066>

Few, S. (2006). *Information dashboard design* (1st ed.). O'Reilly Media.

Gao, C. Y. (2019). Measuring university internationalization. In *Palgrave studies in global higher education* (pp. 73–110). https://doi.org/10.1007/978-3-030-21465-4_3

Gao, Y. (2017). A set of indicators for measuring and comparing university internationalization performance across national boundaries. *Higher Education*, 76(2), 317–336. <https://doi.org/10.1007/s10734-017-0210-5>

Gautam, A., & Jain, S. (2016, September 13). *Performance management system: A strategic tool for human resource management*. Retrieved September 8, 2023, from https://www.academia.edu/27949895/Performance_Management_System_A_StraStrat_Tool_for_Human_Resource_Management

Green, A., & Ferguson, A. (2021, April 7). *Integrating internationalization strategies and DEI initiatives at US universities: What's to be gained? - academic impressions*. Academic Impressions. Retrieved August 30, 2023, from <https://www.academicimpressions.com/integrating-internationalization-strategies-and-dei-initiatives-at-us-universities-whats-to-be-gained/>

Green, M. (2012). Measuring and assessing internationalization. Association of International Educators. http://ofie.kapiolani.hawaii.edu/wp-content/uploads/2013/01/Measuring_and_Assessing_Internationalization.pdf

Hiroshi, O. (2018). Internationalization of Higher Education: Global Trends and Japan's Challenges. *Educational Studies in Japan: International Yearbook*, 12, 91-105. <https://doi.org/10.7571/esjkyoiku.12.91>

Hora, M. T., Bouwma-Gearhart, J., & Park, H. J. (2017). Data-driven decision-making in the era of accountability: Fostering faculty data cultures for learning. *The Review of Higher Education*, 40(3), 391–426. <https://doi.org/10.1353/rhe.2017.0013>

Hou, S. (2022). Internationalization of Chinese open universities. *Asian Association of Open Universities Journal*, 17(1). <https://doi.org/10.1108/AAOUJ-11-2021-0127>

Hudzik, J. K., & McCarthy, J. S. (2012). Leading Comprehensive Internationalization: Strategy and Tactics for Action. *Association of International Educators*. Retrieved August 30, 2023, from <http://cdigital.uv.mx/bitstream/123456789/39307/1/CIZN.pdf>

Hudzik, J. K., & Stohl, M. (2012a). Comprehensive and strategic internationalization of US higher education. *SAGE Publications, Inc.* <https://doi.org/10.4135/9781452218397>

Hudzik, J. K., & Stohl, M. (2012b). Comprehensive and strategic internationalization of US higher education. *The SAGE Handbook of International Higher Education*. <https://doi.org/10.4135/9781452218397>

Hudzik, J. K. (2015). *Comprehensive Internationalization: Institutional Pathways to Success*. Oxon, New York: Routledge

Hunter, F., McAllister-Grande, B., Proctor, D., & de Wit, H. (2022a). The evolving definitions of internationalization. A question of values. In D. Deardorff, H. de Wit, B. Leask, & H. Charles (Eds.), *Handbook on international higher education* (2nd edition, pp. 53-74). Stylus.

Ibrahim, I. I., & Tho, C. (2012). Information system design of performance achievements monitoring in the university: A case study in Binus University. *CommIT (Communication and Information Technology) Journal*, 6(1), 1–7. <https://doi.org/10.21512/commit.v6i1.563>

Išoraitė, M. (2008). The balanced scorecard method: From theory to practice. *Intelektinė Ekonomika*, 1(3), 18–28.

Iuspa, E. (2017). Assessing the effectiveness of the internationalization process in higher education institutions: A case study of Florida International University [PhD Dissertation, Florida International University]. <https://doi.org/10.25148/etd.fi10120304>

Janudina, S. E., Maelah, R., Amir, A. M., & Abdullah, N. L. A. (2015). Performance measurement system and lecturers' performance: Testing the mediation role of competency in Malaysian research universities. *International Business Education Journal*, 8(1), 105–120.

Jibeen, T., & Khan, M. A. (2015). Internationalization of Higher Education: Potential benefits and costs. *International Journal of Evaluation and Research in Education*, 4(4), 196. <https://doi.org/10.11591/ijere.v4i4.4511>

Johnson, J. V. (2018, February 1). *University dashboard and scorecards*. Office of Academic Affairs, the Ohio State University. Retrieved March 4, 2024, from <https://oaa.osu.edu/strategic-planning/university-dashboard-and-scorecards>

Kaplan, R. S., & Norton, D. P. (1996). The balanced Scorecard: Translating strategy into action. *Long Range Planning*, 30(3), 467. [https://doi.org/10.1016/s0024-6301\(97\)80925-9](https://doi.org/10.1016/s0024-6301(97)80925-9)

Khawaja, N. (2020). *Dashboard vs Scorecard - clarifying the differences to implement a data-driven performance management system*. www.linkedin.com. Retrieved September 5, 2023, from <https://www.linkedin.com/pulse/dashboard-vs-scorecard-clarifying-differences-data-driven-khawaja/>

Kiriri, P. (2022). Management of Performance in Higher Education Institutions: the application of the Balanced Scorecard (BSC). *European Journal of Education*, 5(1), 141–154. <https://doi.org/10.26417/158crg70k>

Kirkwood, A., & Price, L. (2013). Technology-enhanced learning and teaching in higher education: what is 'enhanced' and how do we know? A critical literature review. *Learning, Media and Technology*, 39(1), 6–36. <https://doi.org/10.1080/17439884.2013.770404>

Knight, J., & de Wit, H. (2018). Internationalization of higher education: Where have we come from, and where are we going? In D. Proctor & L.E. Rumbley (Eds.), *the future agenda for internationalization in higher education: Next generation perspectives into research, policy, and practice* (pp. xix-xxiii). Routledge.

- Kopecká, N. (2015). The balanced scorecard implementation, integrated approach and the quality of its measurement. *Procedia. Economics and Finance*, 25, 59–69. [https://doi.org/10.1016/s2212-5671\(15\)00713-3](https://doi.org/10.1016/s2212-5671(15)00713-3)
- Kuzilek, J., Hlosta, M., Zdrahal, Z., Vaclavek, J., & Wolf, A. (2015). OU analyse: Analysing at-risk students at the open university. *Learning Analytics Review, LAK15-1*, 1–16.
- Liu, H., & Ko, W. C. (2017). Measuring the degree of internationalization for the Taiwanese banking industry: Scoring measurement by principal component analysis. *International Business Research*, 10(6), 212. <https://doi.org/10.5539/ibr.v10n6p212>
- Madsen, D. Ø., & Stenheim, T. (2014). Perceived benefits of balanced scorecard implementation: some preliminary evidence. *Problems and Perspectives in Management*, 12(3). <https://brage.bibsys.no/xmlui/handle/11250/293754>
- Maharaja, G. (2018). The Impact of Study Abroad on College Students' Intercultural Competence and Personal Development. *International Research and Review: Journal of Phi Beta Delta Honor Society for International Scholars*, 7(2), 18–41. <http://files.eric.ed.gov/fulltext/EJ1188735.pdf>
- Marilyn, G. (2020). *The role of scorecards and dashboards in performance management*. Thomas. Retrieved September 5, 2023, from <https://www.thomasnet.com/insights/the-role-of-scorecards-and-dashboards-in-performance-management/>
- Mia, M. M., Zayed, N. M., Islam, K. M. A., Nitsenko, V., Matusevych, T., & Mordous, I. (2022). The strategy of factors Influencing learning satisfaction explored by First and Second-Order Structural Equation Modeling (SEM). *Inventions*, 7(3), 59. <https://doi.org/10.3390/inventions7030059>
- Mohsin, A., & Zaman, K. (2014). Internationalization of Universities: Emerging trends, challenges, and opportunities. *Journal of Economic Info*, 1(1), 1–9. <https://doi.org/10.31580/jei.v1i1.100>
- Muntean, M., Sabau, G., Bologna, A.-R., Surcel, T., & Florea, A. (Eds.). (2010). *Performance dashboards for universities*. Proceedings of the 2nd International Conference on Manufacturing Engineering, Quality and Production Systems
- Nyangau, J. Z. (2018). Motivations of faculty engagement in internationalization: An agenda for future research. *Forum for International Research in Education*, 4(3). <https://doi.org/10.32865/fire2018431>
- Pukall, T. J., & Calabrò, A. (2014). The Internationalization of Family Firms: A Critical Review and Integrative Model. *Family Business Review*, 27(2), 103–125. <https://doi.org/10.1177/0894486513491423>
- Rahimi, H., Bahmaei, J., Shojaei, P., Kavosi, Z., & Khavasi, M. (2018). Developing a Strategy Map to Improve Public Hospitals Performance with Balanced Scorecard and DEMATEL Approach. *Shiraz E Medical Journal, In Press*(In Press). <https://doi.org/10.5812/semj.64056>

Reis, J. E. D., De Oliveira Sarvo, D., De Faria, L. I. L., & Amaral, R. M. D. (2021). Impact of teacher education abroad in international co-authorship: a study of Federal University of São Carlos's scientific production indexed in the Web of Science. *Transinformacao*. <https://doi.org/10.1590/2318-0889202133e200061>

Rumbley, L., Altbach, P.G., Reisberg, L., & Leask, B. (2022). Trends in global higher education and the future of internationalization. In D. Deardorff, H. de Wit, B. Leask & H. Charles (Eds.), *Handbook on international higher education* (2nd edition, pp. 3-22). Stylus.

Sagara, T. (2014). The 'Quantity' and 'Quality' of internationalization of the faculties in the top universities in China, Hong Kong, Japan, Singapore, and South Korea In the case of economics. *World Journal of Social Science*, 1(2). <https://doi.org/10.5430/wjss.v1n2p32>

Sarwar, S., Ahmed, M., & Muneer, G. (2013). Understanding the various aspects of performance management systems (Case study of a private school). *Journal of Public Administration and Governance*, 3(4), 100–118. <https://doi.org/10.5296/jpag.v3i4.4935>

Shah, S. (2018, December 21). Secondary research – the basics of narrative reviews, systematic reviews, and meta-analysis. Editage Insights. Retrieved May 29, 2024, from <https://www.editage.com/insights/secondary-research-the-basics-of-narrative-reviews-systematic-reviews-and-meta-analysis>

Shuangmiao, H., & Zhou, Z. (2015). Transforming into Global Universities: An Analysis of Research Universities' International Strategies. *International Journal of Chinese Education*, 4, 28–47. <https://doi.org/10.1163/22125868-12340043>

Simmons, A. T. (2014). *Multicultural education & internationalization: Merging the two minds*. Nafsa. Retrieved September 6, 2023, from https://www.nafsa.org/sites/default/files/ektron/uploadedFiles/NAFSA_Home/NAFSA_ReRegRe/Region_VI/States/Multicultural%20and%20International%20Education.pdf

Singh, A. (2021, May). Internationalization of Higher Education: Benefits and Challenges | Insights May 2021. Retrieved May 27, 2024, from <https://www.alliance.edu.in/insights/may2021/internationalization-of-higher-education.html>

Sobkowiak, P. (2019). The impact of studying abroad on students' intercultural competence: An interview study. *Studies in Second Language Learning and Teaching*, 9(4), 681–710. <https://doi.org/10.14746/ssllt.2019.9.4.6>

Soria, K. M., & Troisi, J. D. (2013). Internationalization at home Alternatives to study abroad. *Journal of Studies in International Education*, 18(3), 261–280. <https://doi.org/10.1177/1028315313496572>

Stojanovic, F. (2023, September 4). *Scorecards vs. Dashboards: Definitions, benefits, and differences* | databox blog. Databox. Retrieved September 5, 2023, from <https://databox.com/scorecard-vs-dashboard>

Tang, Y. W., Toh, S., & Leow, A. S. (2019). Dashboards for decision-making in Higher education. ASCILITE Conference Proceedings, 321–329. <https://doi.org/10.14742/apubs.2019.279>

Taylor J, Baines C (2012) Performance management in UK universities: implementing the balanced Scorecard. *Journal of Higher Education Policy and Management* 34(2):111–124.

Team, Y. (2024, March 7). What is a KPI dashboard? - 6 Key Benefits & Examples | Yellowfin. Yellowfin BI <https://www.yellowfinbi.com/blog/what-is-kpi-dashboard-top-benefits-best-practice-examples>

Yesufu, L. O. (2018). Motives and measures of higher education internationalization: A case study of a Canadian university. *International Journal of Higher Education*, 7(2), 155. <https://doi.org/10.5430/ijhe.v7n2p155>

Yüksel, H., & Coskun, A. (2013). Strategy Focused Schools: an implementation of the balanced Scorecard in the provision of educational services. *Procedia - Social and Behavioral Sciences*, 106, 2450–2459. <https://doi.org/10.1016/j.sbspro.2013.12.282>

Zartoshty, P. (2022). Faculty and administrator perspectives on campus internationalization at selected California State University and University of California campuses: Individual efforts and interconnected roles [PhD Dissertation, San Jose State University]. <https://doi.org/10.31979/etd.y52>