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A SYSTEMATIC LITERATURE REVIEW ON ORGANIZATIONAL PERFORMANCE IN GLOBAL HIGHER EDUCATION: AN AFFINITY DIAGRAM APPROACH

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ABSTRACT

The present study aims to examine how organizational performance has been operationalized in previous studies and to identify the most predominant areas of organizational performance in a global higher education context. The current study used two approaches: first, a PRISMA approach was applied for the systematic identification, screening, and selection of eligible articles; subsequently, eligible articles were reviewed to identify key areas and dimensions of organizational performance. Second, an affinity diagram was used to organize the resulting dimensions into various groups. The systematic review of the literature reveals how previous researchers have perceived organizational performance and further proposed 15 areas of organizational performance in the context of global higher education for the future direction of researchers. The study is restricted to 36 articles retrieved from four databases, including Scopus, Emerald Insight, ProQuest, and Google Scholar, from 2015 to 2022. This study contributes to current knowledge of higher education by revealing key areas for organizational performance; however, emerging areas need to be verified empirically before being generalized throughout the world.

Keywords: higher education, higher education performance, organizational performance, university performance

INTRODUCTION

The popularity of the organizational performance (OP) concept among researchers is no mystery, but the confusion lies in comprehending OP to measure the health of an organization in a realistic and holistic way. In prior literature, researchers have attempted to realize OP through various theoretical lenses: some argued that OP is the accomplishment of organizational goals (Uluskan et al., 2016); while others contended that it as an indicator of the firm's business growth (Koohang et al., 2017). At the same time, some researchers perceived OP in the context of financial performance (Hurduzeu, 2015; Pinho, 2008); on the other hand, many argued that OP is a sort of non-financial performance (Pinho, 2008), such as quality performance (Prajogo & Sohal, 2004; Zu, 2009); and innovation performance (Hung et al., 2010; Prajogo & Sohal, 2004).

The lack of consensus on OP is also prevalent in the context of global higher education, despite the fact that some researchers have attempted to measure OP in their studies (Abubakar et al., 2018; Hernandez-Diaz et al., 2020; Khosroabadi et al., 2012; Mohammed et al., 2016). For instance, some researchers emphasized the financial aspects of universities (Feranecová & Krigovská, 2016), while others emphasized non-financial aspects of university performance, such as innovation performance

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(Asiedu et al., 2020); internationalization of universities (Gao, 2018); governance in universities (Lokuwaduge & Armstrong, 2015); research performance (Alshaikhmubarak et al., 2020); operations performance (Martin & Thawabieh, 2018); and other performance/issues related to education, research, infrastructure, process, and evaluation & assessment (Khosroabadi et al., 2012).

As the present study seeks to review the literature related to OP and associated areas of performance in the context of global higher education, it is first necessary to understand the concept of global higher education. According to Marginson (2022), "global higher education and knowledge take place in a distinctive geo-cognitive scale where worldwide relations are constituted. The global scale continually interfaces with the national, regional, and local scales." Some researchers have developed and validated OP scales in the context of global higher education, but they have been criticized for their limited scope and other contextual and cultural issues. For instance, Abubakar et al. (2018) developed a scale to measure the performance of universities in a global HE context. However, the scale was criticized for focusing mainly on universities in developed countries, an inadequate representation (10%) of South American universities, and the irrelevance of items such as Noble prizes won by staff or alumni in the Latin American countries (Hernandez-Diaz et al., 2020). In response, the researchers developed and validated their own scale to assess the performance of universities in Latin American countries, based on five dimensions including research, resources, internationalization, extension, and academics, along with 15 indicators (Hernandez-Diaz et al., 2020). Apart from the studies mentioned above, there are also some studies, but their scope is somewhat limited to just a few aspects (Asiedu et al., 2020; Capano & Pritoni, 2020; Khosroabadi et al., 2012; Lokuwaduge & Armstrong, 2015).

Given the background of the study and the contextual and cultural issues related to OP, previous studies suffer from fragmentation and there is no consensus on the specific drivers of OP in the context of global HE. Therefore, the purpose of the present study is to address the following three research questions (RQs):

- *RQ1:* How have previous researchers operationalized organizational performance in the context of global higher education?
- *RQ2:* What are the most common areas of organizational performance in the context of global higher education?
- *RQ3:* What should be the future directions of organization performance in the context of global higher education?

The structure of the paper is as follows. First, the article discusses the methodology used to identify, screen, and select studies eligible for the current study. Then the included articles are subjected to descriptive analysis, followed by an affinity diagram for organizing many performance dimensions into groups based on their natural relationships. Finally, the paper presents the future directions, conclusions, and limitations in the global higher education context.

METHODOLOGY

This study adopted and integrated two approaches, namely systematic literature review (SLR) to identify, filter and synthesize the existing literature on OP; and the affinity diagram approach to organize the identified (emerging) dimensions of OP into groups or subjects based on their natural relationships in the context of global HE. First, SLR is known to be a systematic, pellucid, scientific, comprehensive, and extensively accepted technique (Thomé et al., 2016). Likewise, researchers have argued that SLR is a structured, reproducible, and scientific process for synthesizing existing information in a rigorous and objective manner, overcoming the weaknesses of traditional review techniques (Denyer & Tranfield, 2009; Tranfield et al., 2003). Although several techniques are available for the literature review, such as systematic or evidence synthesis, narrative, conceptual, rapid, realistic, critical, expert, and state-of-the-art (Petticrew & Roberts, 2006; Sangwa & Sangwan, 2018; Thomé et al., 2016). However, SLR differs from these techniques in that it responds to a particular researcher question (RO), tests hypotheses and theories, or builds new theories while limiting systematic errors or biases (Cronin et al., 2008; Higgins & Green, 2008; Petticrew & Roberts, 2006). The SLR technique has several advantages, such as (1) reducing a large amount of information, (2) combining critical information for decision making, research and policy, (3) low cost, and (4) presenting findings of various studies in a useful way, (5) allowing for the systematic evaluation of relationships between variables, (6) providing evidence to explain inconsistent data and contradictory findings, (7) increasing statistical power in quantitative synthesis, (8) increasing the precision in estimating statistical risks, (9) improving accuracy through systematic reporting of procedures and methods (Mulrow, 1994).

Second, the "affinity diagram" or "KJ Method" is believed to have been developed between the 1950s and 1960s by Jiro Kawakita in Japan (Iba et al., 2017). The affinity diagram is used to organize multiple ideas that are conceptually similar (ASQ, 2022). There has been a wide application of the affinity diagram (KJ method) in Japan, especially in the industrial and educational fields (Iba et al., 2017). Researchers have found affinity diagrams to be useful in situations such as when organizations need to develop their vision statements, identify potential drivers and causes of problems, generate potential solutions, resolve quality-related issues, and generate strategies for market research (Islam, 2005).

PRISMA Approach

The present study has adopted and followed a four-stage PRISMA "Preferred Reporting Items for Systematic Reviews and Meta-Analyses" flowchart (Moher et al., 2009, 2010) for critical appraisal of published articles. The PRISMA statement was issued following a three-day meeting of 29 participants held in Ottawa, Canada, in 2005, to assist researchers by improving their reporting of systematic reviews and meta-analyses (Moher et al., 2009, 2010). The PRISMA flowchart comprising the four stages, including identification, screening, eligibility and included, is shown in Figure 1. The detail of each stage in the context of this study is presented below:



Figure 1. PRISMA Flow Chart (Prepared by authors)

Identification of Studies (Stage -1)

The first stage involved identifying relevant studies from databases that were accessible to current researchers (See Figure 2). Therefore, four databases namely Scopus, Emerald, ProQuest, and Google Scholar were chosen to search for articles to meet the objectives of the present study. The search was conducted using four keywords in the context of HE: (1) performance, (2) organizational performance, (3) higher education performance, and (4) university performance. During this stage, a total of 170

articles were identified, 60 in Scopus, 45 in Emerald, 40 in ProQuest and 25 in Google Scholar. However, 50 articles were removed due to duplication.

Screening of Studies (Stage-2)

The second stage consisted of a screening of articles that were identified in the first stage. During the screening stage (See Figure 3), the researchers read the titles and abstracts of the 120 identified studies and found 65 articles that were not aligned with the aims and objectives of the present study, so these articles were excluded.

Eligible Studies (Stage-3)

The objective of the third stage (See Figure 4) was to determine the eligible articles based on inclusion and exclusion criteria. The development of such criteria is of paramount importance for any SLR study, as the authenticity and generalizability of the results could be affected in the presence of any bias. Therefore, the inclusion/exclusion criteria were initially formulated with the input and consensus of the three researchers of this study. The inclusion criteria for this study included: (1) articles published in the last 8 years (2015-2022); (2) articles in English; (3) availability of full text; (4) access to the database through the university's electronic library; (5) or open-access; and (6) research location at public and private universities. While the exclusion criteria included: (1) article abstracts; (2) articles that were not available in English; and (3) articles that were not available in full text. Also, a total of 55 full-text articles were assessed for eligibility and 19 articles were excluded. Reasons for exclusion include articles that were not within the scope of the present study, were not proper studies, were purely descriptive in nature, and did not use numerical or measurable data.

Included Studies Stage-4)

The final stage (See Figure 5) involved deciding on those articles that were available in full text, complete in all respects, and in line with the research questions that the researchers posed for the study. Additionally, the decision to include was based on the inclusion and exclusion criteria that the investigators developed in mutual consultation. In this study, 36 eligible articles were found to be included in this study for further analysis.















Figure 5. Included Stage (authors)

RESULTS

A total of 36 articles were identified that met the inclusion and exclusion criteria developed by the current investigators in mutual consultation. These articles were subsequently subjected to a more detailed analysis to respond to the proposed RQs. This section describes the results under four

subheadings. First, the descriptive statistics of the 36 selected articles are presented. Second, the present researchers briefly summarized the historical perspective on performance and how OP has been operationalized in previous studies related to HE. Third, the researchers summarized the different performance areas that have been explored over the last eight years and which performance areas are most common in the global HE. Finally, the researchers have suggested future directions considering the gaps identified in the existing literature.

Descriptive Analysis

Year-wise Breakdown of Articles

A descriptive analysis was performed to provide a preliminary overview of the articles, which were published between 2015 and 2022. The reasons for selecting articles in the last eight years were to ensure that the information extracted is the most recent, original, relevant and has not been extensively explored in the previous literature. The year-wise breakdown of articles is presented in Figure 6. The highest number of articles related to OP in HE was 12, which were published in 2020, while the minimum number of articles was 2, which were published in 2016. In addition, from 2019 onwards, a growing trend in OP research has been observed in the HE sector, which means that researchers are now more concerned about the performance of HEIs than before.

Database-wise Breakdown of Articles

Similarly, Figure 7 shows the proportion of articles published in different databases. The pie chart shows that 39% (14) of articles were downloaded from Scopus and 33% (12) of articles were downloaded from Emerald Insight, followed by 17% (06) and 11% (04) of articles retrieved from Google Scholar and ProQuest, respectively.

Country/Region-wise Breakdown of Articles

The country/region wise distribution of articles has been shown in Figure 8. The maximum number of articles was published in two countries, Malaysia, and Pakistan, which is 4 each. While, in the rest of the countries/regions, one or two articles were mostly published on different areas of performance in the context of HE.











Figure 8. Country/Region-Wise Articles (authors)

Operationalization of Organizational Performance in Global HE Context

OP is an indication or reflection of how efficiently and effectively different resources have been used for the progress and success of the organization. However, like other sectors, there is also no agreement on the definition of OP in the context of HE, and the previous literature on OP suffers from fragmentation. Another challenge for HE authorities and academics is whether to focus on the financial or non-financial performance of universities. Therefore, few researchers attempted to investigate the financial performance of universities as a true representation of university performance (Feranecová & Krigovská, 2016). While most of the other authors emphasized non-financial aspects of university performance, such as innovation performance (Asiedu et al., 2020); internationalization of universities (Gao, 2018); governance in universities (Asimiran & Ismail, 2019; Lokuwaduge & Armstrong, 2015); research performance (Aldieri et al., 2020; Alshaikhmubarak et al., 2020; Edgar & Geare, 2013; Horta et al., 2020; Mukundan & Narayanan, 2020; Zhang et al., 2019); operations performance (Martin & Thawabieh, 2018; Wang et al., 2021); and performance/issues related to education, research, infrastructure, process, and evaluation & assessment (Khosroabadi et al., 2012). Apart from that, there are also few studies, in which researchers investigated university performance in both financial and non-financial terms (Mohammed et al., 2016; Yaakub & Mohamed, 2020).

Researchers have investigated OP in both quantitative and qualitative studies. Studies that have examined OP quantitatively in the context of HE are as follows. Abubakar et al. (2018) conducted a study to develop and validate the scale for measuring the performance of HEIs. The scale was developed based on existing literature and then empirically validated by collecting data from 133 VCs/Presidents of sampled universities. The scale was found to be reliable and valid since the values of the alpha coefficient and the exploratory factor analysis were above the threshold values. The measurement scale consisted of twelve items, such as teaching and research, graduate employability, class size, research impact, proportion of international faculty, student attraction, Nobel Prize won by staff and alumni, income from research, adequate resources, infrastructure, and facilities, as well as consulting and training services. However, this scale was criticized for a few reasons. First the scale mainly focused universities of developed countries. Second, during scale development only 10% of respondents were included from South American universities. Third, the inclusion of items like Noble prizes won by staff or Alumni, is not relevant in the Latin-American context, as these countries have only won 17 Noble prizes out of 894 until 2019 (Hernandez-Diaz et al., 2020).

Given the weaknesses of the scale to measure university performance presented by Abubakar et al. (2018), researchers conducted a study to develop and validate a measurement scale by adopting a sequential mixed method design to measure the performance of universities in the global and Latin American context. The results validated five dimensions (research, resources, internationalization, extension, and academics) and 15 indicators to measure the performance of universities in Columbian context (Hernandez-Diaz et al., 2020). Similarly, Wanza et al. (2017) conducted a study to investigate the effects of quality management practices (QMPs) on the performance of Kenyan universities. The researchers first developed the two scales to measure OMPs and university performance and found to be reliable and valid. The items of university performance included: (1) knowledge and expertise are gained through collaboration efforts, (2) collaboration supports research, training, and knowledge transfer, (3) promotes and increases number for local/international collaborations with other institutions/organizations, (4) we have an increase on the enrolment number of students, (5) increased number of research publications in the university, (6) increased on the number of papers presented by staff, (7) staff attend and participate at national/international conferences, (8) levels of staff qualifications has improved in our university, (9) benchmarking practices have increased, and (10) number of staff on development programs has increased. However, the study has some limitations. First, the researchers did not mention whether the scales were based on a 5-point Likert scale or any other. Second, some items on the scale seem ambiguous and inconsistent in terms of wording. Lastly, the scales need to be verified empirically with larger sample sizes in different contexts.

On the contrary, Cheng et al. (2022) in a recent qualitative study, investigated the critical success factors of total quality management that have a significant impact on Moroccan public HEIs. The study was based on semi-structured interviews with three senior professors from public universities located in Casablanca, Morocco, and the findings revealed eight critical success factors for Moroccan public HEIs, including: (1) training students to study independently; (2) developing their intellectual abilities; (3) preparing human capital to meet the objectives of educational institutions; (4) focusing on

the practical skills of the graduates; (5) improving students' skills through intensive courses; (6) offering excellence tailored to national and global needs; (7) improving the salary package of university stakeholders; and (8) countering financial challenges for universities caused by fierce competition. However, this study has some weaknesses. First, it is based solely on the perceptions of three professors, selected through purposive sampling. Second, the scope of the research is limited to public sector universities. Third, the factors identified are mostly of a humanistic nature, so there is a lack of performance factors at the organizational level. Finally, the identified factors are only explored in the Moroccan context, thus the global context of HE is missing.

Likewise, in another qualitative study, the researchers sought to explore the determinants through a fuzzy set qualitative comparative analysis that are associated with HE performance (i.e., teaching performance) in 12 Western European universities. The results suggested that providing institutional autonomy to universities is much less important than expected, while harsh evaluation, generous public funding, and verticalized governance emerged as more relevant (Capano & Pritoni, 2020). In summary, OP in the context of HE has been examined both quantitatively and qualitatively in previous studies. However, considering the contextual and cultural differences and the national priorities of each country, as well as the weaknesses of each study; it is evident that OP is a broad term and therefore there is a lack of consensus among researchers to operationalize OP in the context of HE.

Prevalent Areas of Organizational Performance in Global HE Context

During SLR, the present researchers summarized the most familiar areas of OP in the context of global HE as presented in Figure 9. The SLR results revealed that out of 36 articles, 17 attempted to examine the performance of HEIs in a holistic way. For example, 10 of the articles investigated OP, 04 articles examined university performance, and 03 of the articles studied institutional performance, respectively. In contrast, the SLR also showed that most studies (19 of 36) tend to focus on or examine only one performance area of HEIs. These performance areas include teaching performance, service performance. research performance, operational performance, learning performance, internationalization performance, innovation performance, HE success, and functional performance. According to the SLR findings, the most prevalent and popular performance areas were research performance (07 items), teaching performance (04 items) and service performance (04 items) from a global HE perspective. The 36 selected articles are also classified in Table 1 along with their references.

Performance Areas	References
Functional performance	Mahmoud et al. (2019)
Higher Education Success	Krishnaswamy et al. (2019)
Innovation Performance	Asiedu et al. (2020)
Institutional Performance	Alvi et al. (2021), Busaidi (2020), Kashiramka et al. (2021)
Internationalization	Gao (2018)
Performance	
Learning Performance	Muda et al. (2017)
Operation Performance	Wang et al. (2021)
Organizational Performance	Yaakub & Mohamed (2020), Sciarelli et al. (2020), Rehman & Iqbal
	(2020), Ngoc-Tan & Gregar (2019), Iqbal et al. (2019), Rifa'i et al.
	(2018), Mohammed et al. (2016), Zlate & Enache (2015), Sekli &
	Vega (2021), Asimiran & Ismail (2019)
Research Performance	Alshaikhmubarak et al. (2020), Aldieri et al. (2020), Javed et al.
	(2020), Mukundan & Narayanan (2020), Zhang et al. (2019), Köse
	& Korkmaz (2019), Jacqmin & Lefebvre (2021)
Service Performance	Kinanti et al. (2020), Sinawi & Sharma (2020), Rodríguez-González
	& Segarra (2016), Baker et al. (2015)
Teaching Performance	Chahar et al. (2021), Baker et al. (2015), Muda et al. (2017), Goos
	& Salomons (2017)
University Performance	Hernandez-Diaz et al. (2020), Abubakar et al. (2018), Wanza et al.
-	(2017), Lokuwaduge & Armstrong (2015)

Table 1. Performance Area-wise Classification of Literature

(Source: Prepared by authors)



Figure 9. Performance Areas (authors)

Future Directions of the Organizational Performance

The previous section presented the results based on the SLR of studies on the most predominant areas of performance in the context of HE that have been published during the last eight years around the world. This section basically addresses and responds to the third RQ, regarding the future directions of researchers involving OP in the context of global HE. To answer this RQ, current researchers have adopted an "affinity diagram" approach to analyze the constituent dimensions of performance in HE. The rationale for utilizing the "affinity diagram" method was that, overall, 78 dimensions were identified through SLR, and there was also an overlap between the key areas of higher education performance and their constituent dimensions. Therefore, there was a need to organize conceptually identical dimensions into some common logical groups or performance areas.

The affinity diagram process began with individual brainstorming. The three researchers evaluated the 78 performance dimensions encountered during SLR with the aim of organizing identical dimensions into smaller groups. After individual brainstorming, all researchers came together to share ideas. Each researcher then individually suggested a short name or phrase that best describes the core concept underlying that performance group's dimensions; these proposed names were then discussed among themselves to reach a consensus among all researchers. The names of the performance groups became final after reaching a consensus on each of them. Based on the combined meeting, a total of 15 performance groups emerged that might be easier to understand and treat effectively in future studies. These performance groups include academics and curriculum, availability of resources, communication, customer satisfaction, faculty & staff development, financial performance, functional performance, governance, industry & community engagement, internationalization, structure, quality assurance, research performance, teaching performance, and service performance. Although the study adopted an affinity diagram approach and grouped the different dimensions with mutual consensus; however, given the subjective nature of performance dimensions, there may be potential redundancy between dimensions from distinct groups. The performance groups that emerged and their relevant dimensions are summarized in Table 2.

Groups	Dimensions	Frequency
Academics and	Academic effectiveness	01
Curriculum	Academic Programs and Curricula	01
	Academics	01
	Curriculum	01
	Curriculum development	02
Availability of Resources	Availability of sustainable funds	01
	Institutional Resources	01
	Resources	01
Communication	Communication	01
	Information	01

Table	2.	Emerging	g Grou	os of Or	ganizationa	l Performance	e – Affinitv	Diagram
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Groups	Dimensions	Frequency
Customer Satisfaction	Customer perspective	01
	Customer satisfaction	03
	Graduate employability	01
	Holistic Education	01
	Learning Performance	01
	Strong Alumni	01
	Student	02
	Student results	01
	Student retention and attrition	01
	Student Support Services	01
	Students Enrolment	01
	Student's satisfaction	01
Faculty & Staff	Career Development	01
Development	Effectiveness and Efficiency of Human Resources	01
	Improvement in staff qualifications	01
	Increase in staff development programs	01
	Knowledge and expertise gained	01
	Learning and growth perspective	01
	People results	01
	Staff participation in national/international conferences	01
	Staff satisfaction	01
	Teamwork	01
	Training, and knowledge transfer	01
Financial Performance	Financial performance	03
	Financial perspective	01
	Profitability	01
	Revenue Efficiency	01
Functional Performance	Functional performance	01
	Productivity	01
	Strategy	01
Governance	Governance	01
	Governance Policies	01
	Governance Processes	01
	Organization & Governance	01
Industry & community	Engagement	01
engagement	Extension	01
	Industry & community engagement	01
	Institute results	01
	Society results	01
Internationalization	International affairs	01
	Internationalization	01
	Local/international collaborations	01

Table 2. (Continued)

A Systematic Literature Review on Organizational Performance...

Groups	Dimensions	Frequency
Structure	Board Members	01
	Mission Statement and Goal	01
	Transformation Structure	01
Quality Assurance	Focus on the process	01
	Internal process perspective	01
	Assessment & Quality Assurance	01
	Autonomy and accountability	01
	Increase in benchmarking practices	01
	Planning and Evaluation	01
	Quality Development	01
	Rating criteria	01
	Reputation	01
Research Performance	Number of papers presented by staff	01
	Number of research publications	01
	Research	03
	Research & publications	01
	Research capacity and capability	01
	Research Effectiveness	01
	Research performance	08
	Research productivity	03
	Research ranking	03
Teaching performance	Faculty	02
	Teaching Effectiveness	01
	Teaching performance	05
Service performance	Responsiveness	03
	Service Performance	04
Total = 15	78	107

Table 2	. (Contin	ued)
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(Source: Prepared by authors)

CONCLUSION

The present study first reviewed the literature to examine how previous researchers perceived and operationalized OP in the context of HE around the world. The results revealed that OP is a broad term and therefore there is no agreement among researchers to measure OP in the context of HE due to university contexts and their diverse cultural backgrounds. Furthermore, the study also revealed several key areas of performance in the context of HE based on the systematic literature review of included articles published between 2015 and 2022. These key areas were then subjected to frequency analysis to identify the most prevalent areas of OP in the context of universities. Additionally, the researchers also identified several dimensions from the selected studies and then grouped them via the affinity diagram method organized the 78 dimensions into 15 groups (areas of performance) for the future direction of the researchers. The emerging groups or key performance areas include (1) academics and curriculum, (2) resource availability, (3) communication, (4) customer satisfaction, (5) faculty and staff development, (6) financial performance, (7) functional performance, (8) governance, (9) industry and community engagement, (10) internationalization, (11) structure, (12) quality assurance, (13) research performance, (14) teaching performance, and (15) service performance, respectively.

LIMITATIONS

The current study is based on the SLR approach; however, due to time and financial constraints, the current investigators were unable to focus on each database. Additionally, the literature search only

analyzed peer-reviewed articles published in English and available in four databases, including Scopus, Emerald Insight, ProQuest, and Google Scholar. Furthermore, given the changing nature of knowledge and the constant technological advances in HE, only those articles that were published between 2015 and 2022 were downloaded. Another limitation was the limited literature on OP in the context of HE; therefore, only 36 articles were considered eligible in this study. Since this study has taken an SLR approach, prospective researchers are encouraged to conduct studies based on the perceptions of university leaders, administrative managers, or senior academics regarding the OP areas that emerge from the affinity diagram during this study. Such studies will provide empirical evidence on the applicability of OP areas related to HE around the world.

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