

Higher education management in developing countries: a bibliometric review

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Abstract

Purpose – This study aims to investigate scholarly works on higher education management from emerging economies. It investigates how higher education management has evolved in emerging economies.

Design/methodology/approach – This study is quantitative, and the authors retrieved the metadata from the Web of Science, an extensive pool of interdisciplinary peer-reviewed literary databases for bibliometric analysis.

Findings – The results show the strengths, weaknesses and prospects of higher education institutions (HEIs) in developing countries based on the scholarly output in various journals.

Research limitations/implications – Though the study contributed to the knowledge and expansion of literature in HEIs research, it was only limited to the Web of Science database.

Practical implications – Policymakers and practitioners who want to improve the efficiency and viability of HEIs in developing countries can find a helpful guide in the form of a framework for higher education management in developing countries.

Social implications – It is important to note that the bibliometric impact of higher education management in developing countries might vary depending on various factors, including the quality and relevance of the research, the level of funding and resources available for research and the level of international collaboration, among others.

Originality/value – This study provides a comprehensive overview of the research landscape in higher education management in developing countries by identifying the most influential authors, institutions and countries and the key research topics and trends. This information can be helpful for researchers, policymakers and practitioners who seek to understand the state of research in the field and identify gaps in knowledge.

Keywords Higher education, Management, Developing countries, Bibliometric, Systematic literature review

Paper type Research paper

Introduction

The role of higher education in national development is well-documented. Scholars have consistently highlighted how tertiary institutions contribute to various socio-economic advancements. For instance, [Kruss et al. \(2015\)](#) emphasize that higher education is pivotal in developing human capacities, particularly by fostering technological capabilities. Similarly,

[Cai et al. \(2020\)](#) affirm that it is critical in sustaining innovative ecosystems. Studies by [Agasisti and Bertolotti \(2022\)](#), [Gyimah-Brempong et al. \(2006\)](#) and [Hanushek \(2016\)](#) argue that higher

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education positively impacts national economies, with quality institutions propelling advancements through their graduates, research outputs and innovations. Consequently, managing higher education is essential to realize these benefits.

Ensuring the quality of higher education management (HEM) has become a priority in scholarly discourse. Effective management spans many areas, including curriculum development, course delivery, assessment practices and teaching methodologies (Ali and Shastri, 2010; Sporn, 2003). Numerous scholars propose various strategies to improve the management of higher education institutions. For example, Umashankar and Dutta (2007) advocate for the use of a balanced scorecard, Pinar et al. (2011) and Curtis et al. (2009) suggest developing a branding ecosystem, Sahney (2016) recommends customer orientation and Srikanthan and Dalrymple (2003) emphasize process-focused improvements. Together, these suggestions form a rich discourse on enhancing educational management practices.

Discussions around these strategies reveal a pressing need for improved HEM, especially in emerging economies. Scholars note emerging economies require robust education systems to support economic growth by developing human competencies. Several studies highlight the unique challenges faced by these countries, including evolving regulations (Fielden and LaRocque, 2008), the need for increased efficiency and effectiveness (Ramírez-Correa et al., 2012), a demand for transformative leadership (Sharma and Jain, 2022) and the influence of new technologies on educational practices (Sharma et al., 2022).

Considering these observations, this article aims to examine scholarly work on HEM within the context of emerging economies. It addresses the following questions:

- Q1. What key themes, study contexts and methodologies are prevalent in higher education management research in developing countries?
- Q2. How has the concept of higher education management evolved in these regions, and who are the primary contributors?
- Q3. What future research directions are pertinent to studying higher education management in emerging economies?

This investigation will analyze the progression of HEM research in emerging economies, exploring various themes and research contexts. By highlighting potential avenues for future research, the article seeks to enrich the theoretical and practical discourse surrounding HEM.

Literature review on bibliometric analysis of higher education management

Bibliometric analysis has become widely adopted to examine research trends, identify influential works and map the intellectual structure within a specific field. By systematically analyzing prominent publications, bibliometric studies provide valuable insights into research topics' evolution, thematic focus and scholarly impact. This approach has gained traction across various disciplines. It allows for an objective assessment of research productivity, authorship patterns, citation networks and critical scholarly influence and knowledge dissemination

indicators. In the context of HEM, bibliometric studies reveal critical insights into the development of theories, methodologies and regional research priorities. They highlight prominent authors, journals, institutions and the most-cited articles that shape academic discussions in the field. Bibliometric analyses also help identify collaborative networks, emerging themes and gaps within literature, thus guiding future research directions (Agjei et al., 2023; Olaleye et al., 2023a; Olaleye et al., 2023b). This study uses bibliometric analysis to explore the HEM research landscape in developing countries. By analyzing publications, citation patterns and coauthorship networks, it aims to answer pivotal questions on key research themes, methodological approaches and regional scholarly contributions. This bibliometric approach deepens the understanding of how research in HEM has evolved and reveals pathways for future studies to address emerging challenges within developing economies.

Bibliometric analysis has gained immense popularity in multidisciplinary research (Olaleye, 2020; Agbo et al., 2021a, 2021b; Olaleye et al., 2022). Bibliometric analysis is advancing, and there are many reasons behind this advancement; first, bibliometric analysis can handle large volumes of scientific data and untangle meaningful patterns, supporting the interpretability and clarity of a specific knowledge domain. The second reason stems from the fact that the usual software used to perform bibliometric analysis, such as VOSviewer, Biblioshiny and Gephi, is compatible with scientific databases such as Scopus and Web of Science. The third reason is scalability. It is possible to examine bibliometrics at different international, national, institutional and individual levels. It could aid research excellence framework cycles through evaluation in some sub-panels. From a scholarship slant, bibliometric analysis helps unravel emerging trends within a research domain, identifies collaboration patterns and citation trends and portrays the intellectual structure of a specific field. Thus, it can help capture the evolutionary nuances of a field, both systematically and comprehensively.

Various historical, economic and social factors have shaped the development of HEM in developing countries (Altbach, 2004; Farrell and Oliveira, 1993). As part of this literature review, we also examine the use of bibliometric analysis and related metrics, such as Freq and MCP_ratio, to assess scholarly output. Recent studies emphasize the increasing use of such metrics to evaluate the performance of higher education institutions (HEIs) (Olaleye et al., 2022). These metrics provide valuable insights into global collaboration trends and the impact of publications on HEI management, particularly in emerging economies (Li et al., 2023). Moreover, this review identifies emerging research avenues, including the adoption of sustainability-focused frameworks, which are increasingly applied in higher education contexts to address development goals (Kruss et al., 2015; Sahney, 2016). These countries are also home to some of the world's most unequal societies. In the middle of the 20th century, many developing nations saw the establishment of new universities and the expansion of existing ones as part of a more considerable effort to promote economic development and social progress. This effort was especially true in higher education (Schofer and Meyer, 2005).

The study of HEM has seen a surge in scholarly interest over the past few decades, driven by the increasing global emphasis on quality and sustainability in education systems.

The literature reviewed present a diverse array of bibliometric analyses that offer valuable insights into the evolution and current state of research on HEM, with particular emphasis on various thematic and methodological approaches. However, the review also highlights several theoretical, methodological and practical gaps that must be addressed to advance the field.

Theoretical gaps

The theoretical landscape of HEM, particularly in emerging economies, needs to be more cohesive and requires a coherent framework. Brika *et al.* (2021) emphasize the need for an integrated theoretical framework to understand the quality of higher education, underscoring the current limitations in the literature. Their study illustrates that while bibliometric analysis provides a robust mechanism to detail theoretical underpinnings, the interdisciplinary field demands a more unified theoretical approach. Similarly, Ghaith *et al.* (2023) highlight the absence of consensus on the determinants and trends of quality management in higher education, pointing to significant geographical disparities in the implementation and outcomes of quality management systems. This review underscores a critical need for more comparative studies and theoretical models that can bridge these regional gaps.

Moreover, Hallinger and Chatpinyakoo (2019) reveal that scholars from developed societies predominantly authored the intellectual structure of research on higher education for sustainable development (HESD). This bias suggests a theoretical gap in understanding how sustainability in HEM is conceptualized and implemented in emerging economies. Identifying three core clusters – managing for sustainability, HESD competencies and implementation – indicates a fragmented approach that does not fully integrate the diverse socio-economic contexts of developing nations.

Methodological gaps

Methodologically, there is a reliance on traditional bibliometric measures such as citation and cocitation analyses, which, while informative, may need to capture the full breadth of scholarly impact and emerging trends. For instance, Aypay and Ertem (2022) use a standard bibliometric content analysis approach, including keyword cooccurrence and citation tracking. However, their review does not delve deeply into the qualitative dimensions of the articles, such as the socio-political contexts influencing student outcomes in higher education. Using purely quantitative metrics might obscure nuanced insights that could be gained from mixed-methods or qualitative bibliometric approaches.

Ensslin *et al.* (2022) take a slightly different approach by incorporating a constructivist perspective in their bibliometric analysis of sustainable library management in HEIs. While this qualitative angle offers valuable depth, the narrow focus on library management from a sustainability perspective indicates a methodological gap in generalizability across other facets of HEM.

Furthermore, Antia-Obong *et al.* (2019) identify a distinct gap in the bibliometric analysis of single journals, such as the

Journal of Higher Education Management (JHEM). Their findings suggest that the analysis of single-source bibliometrics, particularly for leading journals in specific fields, remains underexplored. The study points out the need for expanding bibliometric evaluations to include broader and more diverse journal databases to improve the representativeness and robustness of bibliometric studies.

Practical and contextual gaps

Practically, the reviews underscore a need for more focus on the implementation and impact of HEM strategies in emerging economies. For example, Sobral (2020) notes the increasing publication rates on mobile learning in higher education but points out that high-quality publications in this area remain scarce. This review suggests a practical gap in applying and evaluating mobile learning strategies in diverse educational contexts, particularly in developing countries where technological adoption and infrastructure may pose challenges.

Fauzi *et al.* (2023) further highlight the underrepresentation of developing economies in studies related to the sustainable development goals (SDGs) in HEIs. While their bibliometric analysis identifies key research streams such as sustainable curriculum and the challenges posed by the COVID-19 pandemic, the findings are primarily derived from data in developed regions. This geographic skew limits the applicability of the results to the global south, where the dynamics of SDG implementation in higher education could differ significantly.

A recurring theme across the reviewed articles is the call for increased multidisciplinary collaboration and expanded journal indexing to enhance the visibility and impact of research in HEM. Antia-Obong *et al.* (2019) suggest increasing the number of annual issues for journals such as JHEM and enhancing their database indexing to boost awareness and citation rates, which could, in turn, stimulate more comprehensive and varied research outputs.

The reviewed articles collectively indicate that while bibliometric analysis has made significant strides in mapping the intellectual landscape of HEM, several gaps remain. Theoretical frameworks need integration and contextual adaptation to reflect emerging economies' realities better. Methodologically, there is room for more innovative and inclusive approaches beyond traditional bibliometric measures. Practically, the emphasis should be on diversifying the geographic focus and promoting interdisciplinary and cross-cultural collaborations to enrich the field. Addressing these gaps will be crucial for developing a more comprehensive and globally relevant body of knowledge in HEM.

Background of study

On the other hand, these early attempts were frequently marked by a need for more resources and infrastructure and a shortage of trained faculty and staff (Farrell and Oliveira, 1993). In addition, many developing nations were plagued by political unrest, armed conflict and other difficulties, which made it challenging to maintain investments in higher education (Hendrix and Haggard, 2015). Even though developing countries have made significant headway in expanding their higher education systems over time, many obstacles remain to be overcome. Issues such as inadequate funding, poor infrastructure and a lack of institutional

capacity are challenges that many developing countries face in today's world (Singh *et al.*, 2015).

Considering these challenges, academics and professionals working in HEIs have devised various strategies and frameworks to enhance the management of higher education in developing countries. These strategies emphasize the importance of building strong partnerships between universities, governments and other stakeholders. They also call attention to the necessity of improving the quality of higher education rather than merely expanding access to it. In recent years, there has been a growing recognition of the importance of higher education in promoting sustainable economic development and reducing poverty. Specifically, this recognition has occurred in the USA. This step has resulted in a renewed interest in developing innovative approaches to the management of higher education in developing countries and in exploring the potential of new technologies and models to improve the effectiveness and efficiency of higher education systems.

A complex mix of historical, economic and social factors has shaped the evolution and trajectory of HEM in developing countries. These factors have played a role in shaping the evolution of HEM in developed countries. Ongoing research and scholarly work will be of critical importance in helping to identify new strategies and models for the efficient management of higher education in developing countries, as well as in ensuring that these systems can contribute to sustainable economic development and social progress. There has been a rise in both interest and concern regarding HEM in developing countries. Developing countries face unique challenges when it comes to managing their higher education systems (Altbach, 2004). These challenges include a need for more resources, inadequate infrastructure and a shortage of trained faculty and staff. In addition, developing nations frequently need to possess the robust legal and regulatory frameworks required to support the efficient management of their higher education systems.

Despite these obstacles, higher education is essential to economic growth and poverty alleviation in developing countries. The expansion of higher education systems in several developing countries has been a focus of significant investment in recent years, aiming to broaden participation in educational opportunities and enhance the capabilities of the local labor force.

On the other hand, effectively managing these ever-expanding systems presents a significant challenge. There is a need for research and scholarship that can help identify best practices for HEM in developing countries and provide insights into how these systems can be made more effective, efficient and sustainable (Harman, 2007). There is also a need for research and scholarship that can help identify best practices for HEM in developed countries.

Furthermore, there has been a lot of recent writing about how crucial it is for universities in developing economies to foster a research and innovation culture. Universities in Oman have made strides toward fostering a culture of research, according to Ali and Al-Riyami (2021), but there are still obstacles to overcome in terms of resources and infrastructure. Ndofirepi and Mutasa (2021) conducted a study on leadership and creativity in Zimbabwean universities; their findings underscore the value of cultivating a common vision and working together to achieve it.

Scholars and practitioners in HEM have highlighted the importance of building strong partnerships between universities, governments and other stakeholders to address the challenges of managing higher education in developing countries. These challenges include a need for more quality in higher education systems and poor visibility of developing countries' researchers and their academic work. The context of HEM in developing countries is complex and multifaceted, with opportunities and challenges (Jowi *et al.*, 2013). Ongoing research and scholarly work will be essential in helping identify strategies for the efficient management of higher education systems in developing countries, as well as in ensuring that these systems can contribute to the reduction of poverty and the maintenance of sustainable economic growth.

Methodology of the study

We retrieved the metadata for this study from the Web of Science, an extensive pool of interdisciplinary peer-reviewed literary databases for quantitative analysis (Li *et al.*, 2023). We ran our search in March 2023 for the following leading journals in Higher Education Institutions Journals: *International Journal of Sustainability in Higher Education*, *Studies in Higher Education*, *Higher Education*, *International Journal of Educational Management*, *Industry and Higher Education*, *Journal of Marketing for Higher Education*, *Journal of Applied Research in Higher Education*, *Higher Education Policy*, *South African Journal of Higher Education*, *Journal of Further and Higher Education*, *Higher Education Research Development*, *Teaching in Higher Education*, *International Journal of Educational Technology in Higher Education and Assessment Evaluation in Higher Education*.

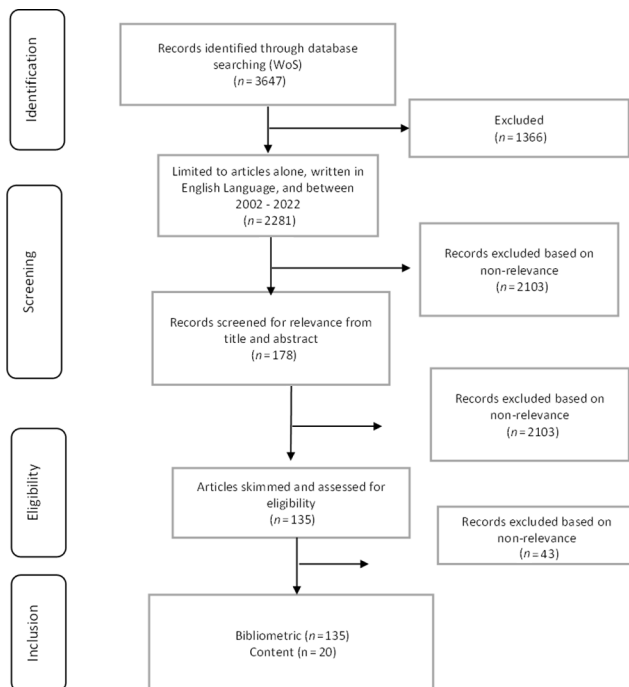
Using multiple rounds of screening, we selected the most relevant journals based on their top positions in HEIs fields. These journals are academic platforms for most of the original published research on HEIs. These publications in top outlets are more likely to have better internal and external validity. The selected journals draw from varied perspectives of HEIs. The initial search in Web of Science generated 3,647 results by applying a filter based on year (2002–2022), languages, articles and publication outlets, excluding 3,254. One of the authors independently read the documents retrieved to assess their relevance, such that we removed 75 (titles that are not relevant to HEIs) articles based on title and abstract screening, 178 were removed based on the titles that are not relevant to the HEIs in the developing countries and 5 were removed based on HEIs mixed of developing and developed countries. In the end, 135 articles focused on HEI management in developing countries for the final analysis. The standardized inclusion and exclusion criteria sanitized the criteria for the article's selection for this study.

This study uses Biblioshiny (Aria and Cuccurullo, 2017) to accomplish the objectives through R-Studio. Biblioshiny was used to analyze the quantity and quality of the author's annual scientific production, its conceptual, intellectual and social structures, and the clustering of different actors in literary production. Our study's research design is depicted in Figure 1, and Figures 2–5 show the data analysis results.

The findings

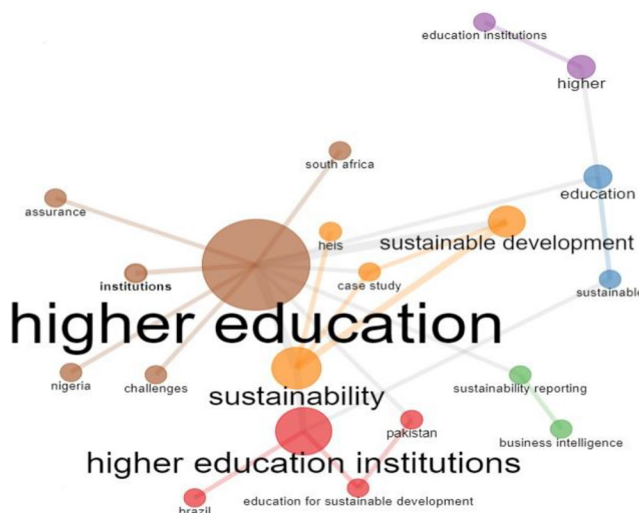
This section presents the result of the quantitative analysis of HEM research in developing economies using the bibliometric

Figure 1 PRISMA diagram of the data selection procedure



Source: Created by the authors

Figure 2 Theme and context of higher education management research in developing economies



Source: Created by the authors

approach. The presentation follows the basic approach in an attempt to address the research questions formulated for this study:

RQ1. What key themes, and study contexts, are used in higher education management studies in developing countries?

To discuss the thematic area of HEM studies in developing countries, we analyzed the metadata of studies collected for this

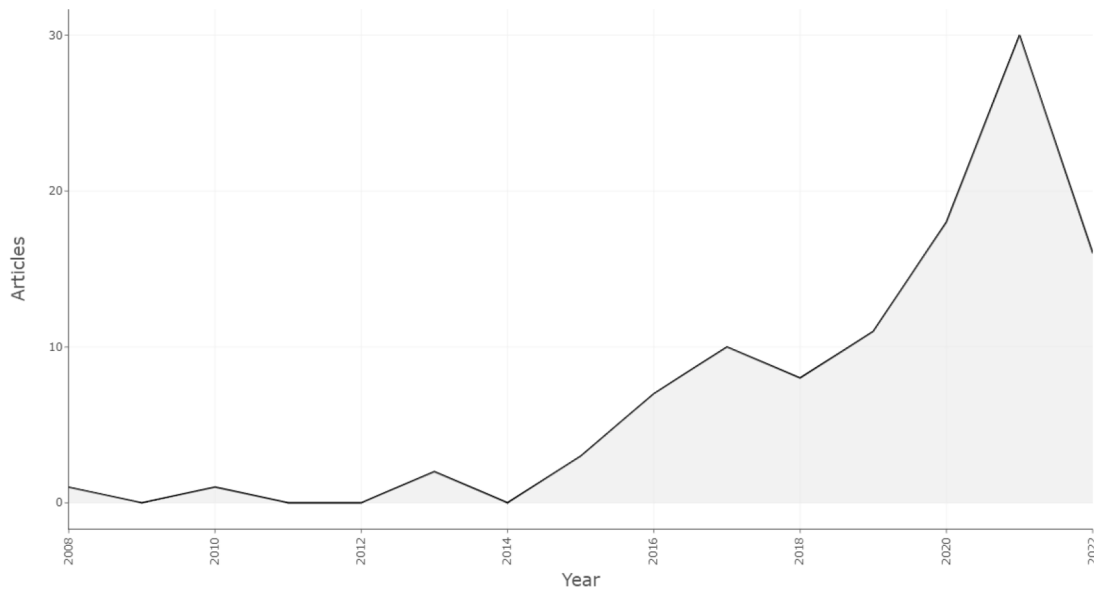
research, and the results are presented in this section. From [Figure 2](#), it is evident that the main keywords for this study have larger nodes. For example, keywords such as “higher education” and “higher education institutions” dominate the research topic. This is true for a typical review study where the main search strings focusing on the study area are reflected in the theme. Notwithstanding, the analysis also found interesting topics such as “Sustainability” and “Sustainable development,” which shows other areas for studies on HEM. Interestingly, research on sustainability has been distilled in the literature emerging from higher education in the developing context so that it is possible to gain insight into how “education for sustainability,” “sustainability report” and “sustainable education” form part of the important topics. In addition, the research landscape is shown to discuss topics such as “challenges” of or in HEM; “case studies” in the research domain (i.e. higher educational management in the developing economies) were revealed in the finding. Furthermore, the result also revealed a list of developing countries where the topics are mostly discussed, which includes Nigeria and South Africa from the African context, Pakistan from the Asia context and Brazil from the South American context.

To further investigate the research landscape of HEM with a focus on developing economies, this study explores the metadata of authors and corresponding authors’ countries and affiliations. There is a high possibility that these indicators can reveal the context in terms of the region where the study emanated and other related insights. Hence, this study analyzed the most relevant countries using the corresponding authors’ metadata and present results as shown in [Table 1](#). The analysis shows that South Africa tops the list of countries with the highest number of published articles with single country publications (SCP), however, with a significantly low number of multicountries publications (MCP). Brazil followed behind South Africa with a total number of 15 articles, 12 SCP and 3 MCP. Interestingly, Malaysia is third in the list but had a higher MCP of 5 with 14 articles and 9 SCP. There are several countries with only SCP and no MCP, indicating that many developing countries conduct research on HEM locally with little or no global collaborations. In [Table 1](#), Freq stands for the frequency of articles that a given country has published on HEM in developing countries; MCP_ratio is the ratio of multicountry publications. The same will be obtained by carrying out bibliometric analysis. The latter brings in focus national and international collaborations.

In addition, the analysis found some developed economies, for example, the UK, Australia and Germany, among the list of countries researching HEM in the context of developing economies. Typically, this finding could be attributed to a few outliers in the data analyzed or some kind of collaboration that occurs between authors from developed and developing economies in studies on HEM. Another explanation could be that authors of studies on HEM from developing economies could be affiliated with institutions from developed countries such as the UK ([Mogaji et al., 2020](#)):

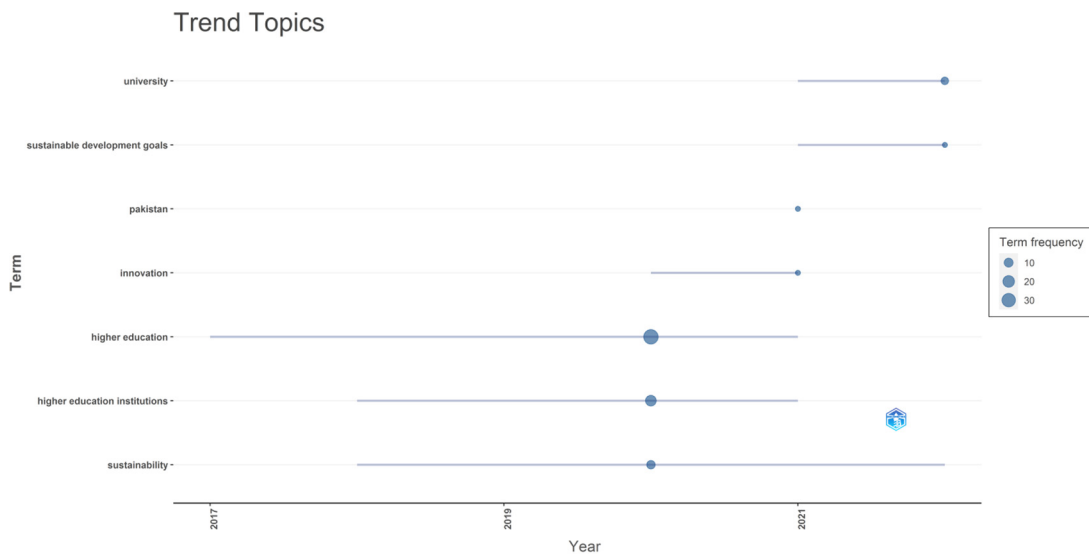
RQ2. How has the concept of higher education management studies in developing countries evolved over the years and who are the main contributors to this evolution?

Figure 3 Annual scientific production of articles on higher education management in developing economies



Source: Created by the authors

Figure 4 Trending topics in higher education management research landscape

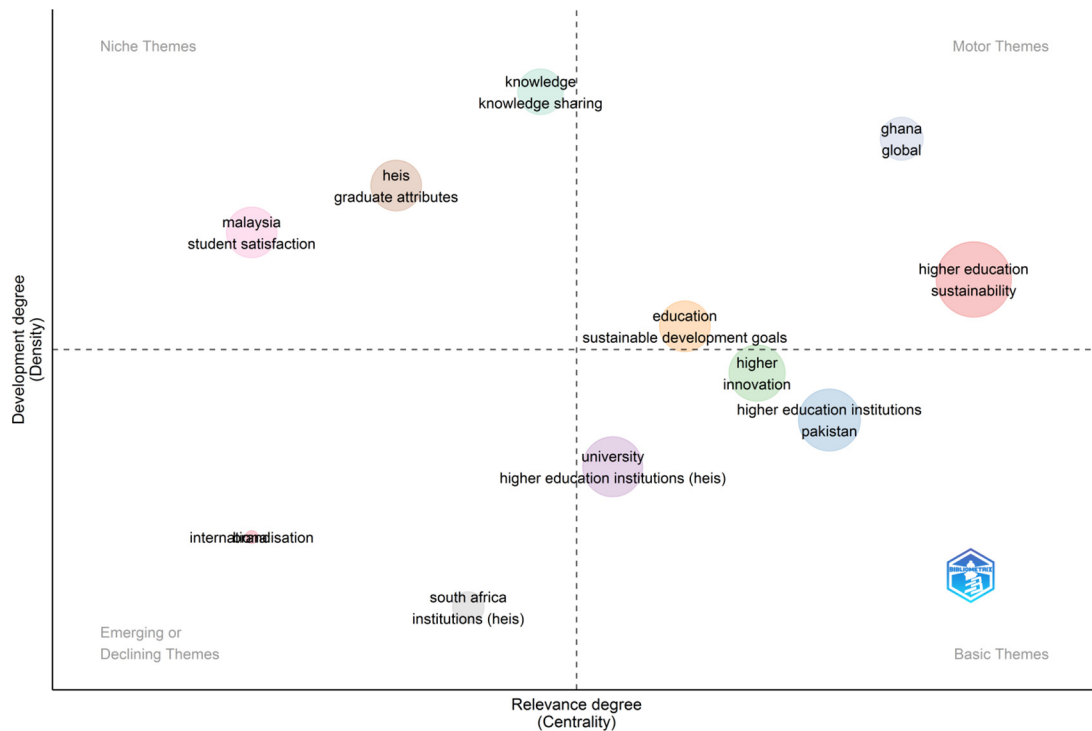


Source: Created by the authors

Regarding the evolution of research in HEM from developing economies, this study investigated the publication progression over the years, thematic trends, trending topics and authors' contributions. As shown in [Figure 3](#), research publications on HEM in developing contexts began to witness progressive growth in 2019. Before then, the annual production was below 10 on average. A unique feature of the growth is that there was a spike in 2021 where 30 publications were recorded. Although, one would have imagined that the disruption of the COVID-19 pandemic between 2019 and 2022 which forced many researchers to work from home or remain in isolation could

affect their productivity. However, the impact of the COVID-19 pandemic appears to have effect visibly on researchers in this domain only in 2022 when the number of article productions declined to 16 (almost half the previous year).

From the volume of articles published between 2008 and 2022, [Table 2](#) revealed that the *International Journal of Sustainability in Higher Education* remains the venue with most publications ($n = 34$). The list shows that the *International Journal of Educational Management* occupied the second position ($n = 22$) regarding the venues where most articles in the domain are published. Notably, the *South African Journal of*

Figure 5 Thematic clustering of topics in higher education management research

Source: Created by the authors

Higher Education is one of the regular venues where studies on HEM are published, suggesting the possible reason why South Africa has the highest number of publications in this domain.

The analysis of trending topics in HEM research in the developing economies revealed that main topical issues discussed among scholars before the year 2000s were mainly focused on “work,” “governance” and “knowledge”. This finding is presented in Figure 4. It is interesting to note that from the year 2000 upward, there are discussions around “performance,” “university” and “indicators”. This finding suggests that the trending topics in HEM research are addressing issues related to performance indicators across HEIs.

Regarding the thematic clustering of topics, Figure 5 shows four quadrants that indicate the niche themes, motor themes, declining/emerging themes and basic themes:

RQ3. What are the future research avenues related to higher education management studies in developing countries?

To address RQ3, What are the future research avenues related to HEM studies in developing countries?, a comprehensive bibliometric analysis was conducted using Biblioshiny. This analysis used techniques, including cooccurrence of words, thematic analysis, trend topic analysis, annual scientific production, correspondence between authors’ countries and relevant sources. The results offer critical insights into the evolving landscape of HEM research in developing countries, highlighting current trends and potential directions for future investigation. The bibliometric analysis conducted through Biblioshiny reveals a rich yet evolving landscape of HEM research in developing countries. Significant gaps remain while

substantial progress has been made, particularly in areas such as quality management and sustainability.

The analysis revealed that likely future research topics include the following:

- Assessing how globalization and regionalization have altered developing countries’ capacities to regulate and manage their universities.
- Examining the function of private and nongovernmental organizations in funding and delivering higher education.
- The impact of higher education on developing nations’ economies will be studied.
- Analyzing how digital innovation and technology can be implemented in the administration of higher education in underdeveloped countries.
- Assessing the influence of the COVID-19 pandemic on the administration, management and provision of higher education in underdeveloped nations.

Discussion

This review demonstrated a significant growth in the number of scholarly publications published about HEM in developing countries over the years. Its expansion reflects the increasing importance of HEM in these countries, as evidenced by the fact that these countries are growing. HEIs in developing nations have several challenges, including a shortage of trained workers, inadequate infrastructure and limited finance. To address these issues and improve the overall quality of higher education in developing countries, HEM research is critical. According to a review of the literature, research on HEM in

Table 1 Countries researching higher education management in developing economies

Country	Articles	SCP	MCP	Freq	MCP_Ratio
South Africa	23	21	2	0.17	0.09
Brazil	15	12	3	0.11	0.20
Malaysia	14	9	5	0.10	0.36
United Kingdom	14	4	10	0.10	0.71
Pakistan	8	5	3	0.06	0.38
China	7	4	3	0.05	0.43
India	7	7	0	0.05	0.00
Australia	4	3	1	0.03	0.25
Nigeria	4	4	0	0.03	0.00
Oman	3	2	1	0.02	0.33
Zimbabwe	3	2	1	0.02	0.33
Ethiopia	2	2	0	0.02	0.00
Russia	2	2	0	0.02	0.00
Saudi Arabia	2	1	1	0.02	0.50
United Arab Emirates	2	1	1	0.02	0.50
United States of America	2	1	1	0.02	0.50
Vietnam	2	2	0	0.02	0.00
Austria	1	0	1	0.01	1.00
Chile	1	0	1	0.01	1.00
Colombia	1	1	0	0.01	0.00
Czech Republic	1	1	0	0.01	0.00
Germany	1	1	0	0.01	0.00
Ghana	1	1	0	0.01	0.00
Indonesia	1	1	0	0.01	0.00
Jamaica	1	1	0	0.01	0.00
Kenya	1	1	0	0.01	0.00
Mexico	1	0	1	0.01	1.00
Nepal	1	1	0	0.01	0.00
Peru	1	0	1	0.01	1.00
Philippines	1	1	0	0.01	0.00
Portugal	1	0	1	0.01	1.00
Serbia	1	0	1	0.01	1.00
Singapore	1	0	1	0.01	1.00
Spain	1	0	1	0.01	1.00
Sri Lanka	1	1	0	0.01	0.00
Switzerland	1	0	1	0.01	1.00
Thailand	1	1	0	0.01	0.00
Ukraine	1	1	0	0.01	0.00

Source: Created by the authors

poor countries has increased dramatically in recent years. Numerous authors have stressed the significance of adopting appropriate management methods and policies to improve higher education quality in developing nations. Wang, Yin, and Liu (2021), for example, suggested that building quality assurance systems and accreditation processes is crucial for enhancing the quality of higher education in developing nations.

The function of leadership in HEM is another research trend found in the literature. Numerous academics have underlined the significance of competent leadership in increasing organizational effectiveness and accomplishing institutional objectives. Mofokeng and Nkomo (2021), for example, underlined the importance of transformational leadership in developing-country HEIs to foster innovation and creativity.

Table 2 Venues publishing articles on higher education management in developing economies

Sources	Articles
<i>International Journal of Sustainability in Higher Education</i>	34
<i>International Journal of Educational Management</i>	22
<i>Journal of Applied Research in Higher Education</i>	19
<i>South African Journal of Higher Education</i>	14
<i>Higher Education</i>	12
<i>Studies In Higher Education</i>	9
<i>Industry and Higher Education</i>	8
<i>Journal of Marketing for Higher Education</i>	7
<i>Higher Education Research & Development</i>	4
<i>Higher Education Policy</i>	3
<i>Assessment & Evaluation in Higher Education</i>	1
<i>Journal of Further and Higher Education</i>	1
<i>Teaching In Higher Education</i>	1

Source: Created by the authors

The initial search for this study in Web of Science yielded 3,647 results after applying filters based on year (2002–2022), languages, papers and publication venues, removing 3,254 (Figure 1). The main keywords for this study have larger nodes, as shown in Figure 2. Terms such as “higher education” and “higher education institutions” dominate the research topic. This appears to be true for a normal review study where the theme represents the primary search strings focusing on the subject area. The results also showed a list of developing countries where the topics are talked about most often, such as Nigeria and South Africa in Africa, Pakistan and Brazil in Asia and South Africa and Brazil in South America.

This study looks at the landscape of research in HEM, with a focus on developing economies. It does this by looking at the metadata of authors and the country and affiliation of authors who are related to them. The table reveals that South Africa has the highest number of published articles with single-country publishing (SCP) but a substantially lower number of multicountry publications (MCP) (Table 1).

Figure 3 shows how many scientific articles are written about HEM in developing countries every year. Since 2019, the number of research articles on managing higher education in developing countries has been slowly rising. Previously, the average number of publications was 10; the maximum number of publications (30) was recorded in the year 2021, and 16 publications were reported in the year 2022. Table 2 shows the number of articles published between 2008 and 2022. Most articles ($n = 34$) were published in the *International Journal of Sustainability in Higher Education*. According to the data, the *International Journal of Educational Management* has published the most articles on the topic ($n = 22$). The *South African Journal of Higher Education* frequently publishes studies on HEM, which may explain why South Africa generates the most work in this sector.

Trending topics in HEM research are about performance indicators in higher education institutions. Before the year 2000, words like “work,” “governance,” and “knowledge” were used, and after the year 2000, words like “performance,” “university” and “indicators” were used (Figure 4).

Finally, [Figure 5](#) depicts the thematic clustering of issues in HEM research, with four quadrants representing specialized themes, motor themes, declining or emerging themes and basic themes.

[Smith, Johnson, and Williams \(2022\)](#) conducted a similar search using the Web of Science to find articles published between 2002 and 2022, with specific criteria based on language, papers and publication locations. The authors investigated the metadata of authors, as well as the country and affiliation of writers who are associated with them, after filtering the findings. The authors also examined trends in the number of research articles on HEM in developing nations, as well as the journals that published the most articles on the subject. Finally, the authors examined the themes and subjects that have evolved in HEM research over time and classified them into four quadrants: specialized themes, motor themes, decreasing or emerging themes and basic themes.

Conclusion

The HEI managers can initiate the use of innovation and technology. They both have the potential to significantly contribute to improving higher education administration in countries that are still underdeveloped. This move can involve exploring innovative teaching and learning methods, as well as using technology to increase access to education and improve the efficiency of educational institutions. HEIs in developing countries can improve their efficiency and long-term viability and contribute to the growth of the communities in which they are located if they focus on the critical areas listed above. It is essential to note that the scope of this framework is incomplete, and it can be adapted to the specific circumstances faced by each institution of higher learning located in a developing nation. The HEI managers should proffer solutions on case-by-case needs.

This study is significant, and it sheds light on the trendy topics of HEIs in developing countries. Innovation and sustainability are the keywords that resonate with HEIs. Though the study contributes to the knowledge and expansion of literature in HEIs research, it was only limited to the Web of Science database. The future researcher may embark on comparative studies of developing countries and extend the results of this study to more outstanding academic databases. Future research could focus on emerging areas such as digital transformation, governance and the nuanced impacts of SDGs within the context of higher education. In addition, expanding the geographical scope of research to include underrepresented regions and fostering interdisciplinary and cross-regional collaborations will be crucial in building a more comprehensive and globally inclusive understanding of HEM in developing countries.

Implications for research

This study contributes to understanding the challenges and opportunities in HEM in developing countries. By analyzing bibliometric data, future research can build on this study by exploring the specific impacts of factors such as globalization, technology adoption and governance on educational outcomes. A more explicit focus on international partnerships could provide insights into their direct economic and academic

impact. Based on the work of [Hallinger and Chatpinyakooop \(2019\)](#), this study may help to reinforce the connection between global collaborations and long-term quality improvements in HEIs.

Future research should focus on digital transformation, SDG alignment and governance models. These areas are critical for understanding how HEIs can drive socio-economic growth and meet sustainability goals, extending beyond economic outcomes to broader societal impacts.

Implications for practice

The study provides a potential framework for HEI managers to optimize governance, curriculum design, faculty development and technological integration and address immediate challenges. This framework emphasizes innovation and sustainable practices, encouraging HEIs to develop long-term strategic plans for achieving globally competitive standards.

A key takeaway for administrators is the need for efficient resource planning and distribution. Establishing clear goals, KPIs and action plans can significantly improve HEIs' operational efficiency. Institutions can achieve better educational and research outcomes by implementing robust quality assurance mechanisms and performance metrics.

Technology integration can make higher education more accessible and affordable, especially in regions where traditional learning methods may not be feasible. HEI managers can use technology to broaden the reach of education, ensuring more students benefit from online resources and digital classrooms, ultimately supporting social and economic growth.

Implications for society

This study has implications for policymakers aiming to uplift educational quality in developing countries. Effective management in HEIs can contribute to sustainable economic development by producing a skilled workforce capable of driving growth across sectors. In addition, aligning with global standards through international collaboration supports long-term economic benefits by ensuring the workforce remains globally competitive.

A well-governed higher education system can significantly impact public attitudes toward education and socio-economic mobility. By providing high-quality education, HEIs can reduce poverty levels and enhance the quality of life within communities. The study also highlights the potential for HEIs to become centers of social progress, influencing positive change by educating future leaders and innovators.

The emphasis on sustainability and innovation aligns with societal goals to address environmental, social and economic challenges. This study's findings suggest that HEIs should prioritize SDG-related initiatives, encouraging students and faculty to engage in sustainability-focused projects that contribute to the institution's and society's long-term viability.

Bridging theory and practice

The study connects theoretical frameworks on governance, quality assurance and technology use in education with practical applications in developing country contexts. By examining bibliometric data, it outlines actionable steps for

HEI managers to optimize their institutions' operations. This bridge between theory and practice enhances the research's commercial and educational value, providing insights that can inform public policy and institutional management strategies. Ultimately, the study contributes to society by promoting educational quality and social mobility.

In summary, the managerial implications outlined above provide a coherent link between the study's findings and practical applications. Expanding on international collaboration and its long-term impact on HEI quality, the research offers a roadmap for effective HEM in developing countries. The addition of Hallinger and Chatpinyakoo (2019) could reinforce the literature on the connection between international partnerships and long-term economic benefits, clarifying this link for future researchers.

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Further reading

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