



Research Article

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Sustainability of Higher Education Institutions and Sustainable Leadership of Higher Education Teachers: A Literature Review-Based Exploration

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Abstract

The emergence of the concept of sustainability has caused higher education teachers in higher education institutions to reflect on the rationality of their behaviour. Therefore, the purpose of this study is to clarify the concept and implications of the sustainability of higher education institutions and the sustainable leadership of higher education teachers by adopting a literature review approach, combined with the uniqueness of the higher education domain, based on the Triple Bottom Line and Principles for Responsible Management Education. The close relationship between the sustainability of higher education institutions and the sustainable leadership of higher education teachers will be theoretically validated by establishing a correlation model between these two elements. This research not only deepens the consideration of sustainable development in higher education, but it also provides guidance and support for its practical implementation.

Keywords: sustainability of higher education institutions, sustainable leadership of higher education teachers, literature review

1. Introduction

The international community is currently faced with significant environmental, economic and social challenges (Frizon & Eugénio, 2022), and higher education institutions are extremely effective in exploring pathways for sustainable societal development by leveraging their innovation in knowledge production (Hallinger & Chatpinyakoop, 2019). However, there are considerable differences with regard to behavioural norms and the definition of sustainable development among universities (Lozano et al., 2013; Wu & Shen, 2016), and this leads to a lack of collaboration that has a negative impact on their sustainability transformation (Findler et al., 2018; Lozano et al., 2013). Meanwhile, the level of sustainable leadership of higher education teachers not only affects the implementation of the sustainability concept within schools, but also the quality of cultivating sustainable development talents (Pang & Miao, 2017). On this basis, there is currently insufficient elucidation of the definition of sustainable leadership among higher education teachers (Pan et al., 2023), and their dual role as organizational staff participating in school decision-making is often overlooked (Yáñez et al., 2019).

Despite various scholars' attempts to integrate the concept of organisational sustainability of higher education institutions with the Triple Bottom Line (TBL) theory, the relevant literature is mainly based on exploring the connection between specific areas of schools and single bottom lines, while comprehensive evaluation research results are still scarce (Menon & Suresh, 2020). This causes a lack of an in-depth and comprehensive integration of sustainable development elements at various levels of higher education institutions (Findler et al., 2018; Lozano et al., 2015). Furthermore, the current application of the Principles for Responsible Management Education (PRME) is mainly limited to meeting the educational management needs of business schools (Laasch et al., 2020). The value of interdisciplinary education and learning in integrating PRME and effectively responding to sustainable development goals has not been fully realised yet (Filho, 2017; Greenberg et al., 2017; Moosmayer, 2015) in terms of inspiring and cultivating responsible education managers and promoting reflection and additional research on the connotations of sustainable leadership among higher education teachers (Godemann et al., 2014).

Building upon this, the present study is grounded in the TBL and the PRME in response to Caeiro et al's (2020) perspective of integrating the overall dimensions and the involvement of organisational sustainability in higher education institutions. Its aim is to explore the concept and implications of higher education institutions' organisational sustainability from a holistic perspective of economic, social and environmental bottom lines (Carter & Rogers, 2008). Special attention is paid to the professional characteristics of higher education teachers that unify teaching and leadership both inside and outside the classroom (Katzenmeyer & Moller, 2009). Purpose, Value, Method, Research, Partnership, Dialogue and Operation are used as entry points to explain the definition and implications of sustainable leadership among higher education teachers (Assumpção & Neto, 2020). This will emphasise the huge significance of comprehensively transforming higher education institutions' organisational sustainability in order to develop the sustainable leadership of higher education teachers (Cook, 2014), further exploring the correlation between these two elements from a theoretical perspective.

As well as its focus on organisations' sustainable development, this study also consists of research on sustainability in human resource management (Daneshjoo et al., 2019). On the one hand, it aims to broaden the perspective and approach toward exploring higher education institutions' organisational sustainability and the sustainable leadership of higher education teachers, which helps to alleviate the relative scarcity of research on teachers' sustainable leadership in the field of higher education (Leal Filho et al., 2020). Additionally, it provides valuable theoretical references for empirical studies by investigating the relationship between the organisational sustainability of higher education institutions and sustainable leadership among higher education teachers. On the other hand, it seeks to deepen the understanding of the need to transform organisational sustainability and develop sustainable leadership among higher education teachers. In turn, this will aid higher education teachers to achieve maturity in sustainable leadership, thereby enabling higher education

institutions to become catalysts for sustainable societal development, transformation and transition (Caeiro et al., 2020).

2. Methodology

To ensure the ability of the research findings to address the research topic, a literature review was conducted based on data online in the English language, tracking the keywords, "College Organisational Sustainability" and "Sustainable Leadership for Teachers/Sustainable Faculty Leadership" in indexed journal databases such as Scopus, Web of Science, and other relevant websites. The retrieved documents and articles are then reviewed, analysed and structurally evaluated based on inclusion criteria, with the aim of achieving a systematic review of the literature (Ahn & Kang, 2018).

The primary inclusion criteria used for "College Organisational Sustainability" are the 17 Sustainable Development Goals (SDGs) adopted in policy documents during the Seventieth Session of the United Nations General Assembly in 2015. In terms of articles, based on the research of Shi et al. (2019), sustainability is divided into three distinctive conceptual categories: absurd, weak and strong, according to the relationship between natural capital and manufactured capital. Hence, the widely accepted concept of weak sustainability is adopted as the criterion for selecting the articles in this study due to the need to comprehensively consider the overall economic, social and environmental circumstances to measure the level of organisational sustainability in higher education institutions (Shi et al., 2019).

With regard to the inclusion criteria for "Sustainable Leadership for Teachers/Sustainable Faculty Leadership," considering that the literature that defines the sustainable leadership of teachers in higher education remains unclear as of the 1st of March, 2024, the approach taken in this study is based on the PRME promoted by the United Nations Global Compact as the foundation of policy documents. The study revolves around the dual attribute perspective of extending the scope of faculty leadership in higher education from the traditional classroom to broader roles, including activities beyond the classroom and to driving changes in teaching models, as proposed by Pan et al. (2023). By exploring the integration of the concepts of "Sustainable Leadership" and "Teacher Leadership in Higher Education," the study aims to define the concept and implications of sustainable leadership for higher education teachers and further investigate the correlation between higher education institutions' organisational sustainability and the development of sustainable leadership among higher education teachers.

3. Theory

3.1 *Triple Bottom Line*

TBL is a perspective that supports and implements the concept of sustainable development (Elkington, 2006). It expands traditional economic interests by incorporating environmental and social dimensions to comprehensively measure organisations' business performance (Hourneaux Jr et al., 2018). As summarised by Mohd Zawawi and Abd Wahab, (2019), economic performance measurement standards typically consider the profit and loss factors of organisations' operations. The social performance generally refers to the actual impact of the organisation's operations on local communities and employees, while the environmental performance is often regarded as the use of natural resources in the organisation's operational process.

As a comprehensive development model, the sustainability of higher education institutions requires an overarching focus on all related activities (Caeiro et al., 2020). Therefore, the sustainability of higher education institutions is comprehensively interpreted in this study based on the economic benefits, social responsibilities, and environmental protection aspects of the TBL (Leal Filho et al., 2020). However, in view of the significant differences between higher education

institutions and other organisations (MacDonald, 2009), this study begins by clarifying the connotations of the economic, social, and environmental bottom lines tailored specifically to fit higher education institutions, taking account of their unique characteristics.

1. Economic bottom line in higher education institutions

The economic bottom line of higher education institutions involves ensuring the existence of sufficient financial resources to support their scientific research and educational activities (Sazonov et al., 2015). Economic sustainability is perceived as a tool to achieve this goal, with the academic aspect represented by research, and education playing a core role in the university's economic planning (Kouatli, 2019).

2. Social bottom line in higher education institutions

Higher education institutions should actively collaborate with stakeholders to address social issues; thereby creating value for society and the local community (Asrar-ul-Haq et al., 2017; Maqbool & Zameer, 2018). These institutions play a vital role in communities by enhancing talent, imparting knowledge, fostering the commercialisation of technology, and encouraging innovation (Kusmulyono et al., 2023). As a result, they should maintain close connections with stakeholders, such as teachers and students, to understand their needs and expectations (Kappo-Abidemi & Kanayo, 2020).

3. Environmental bottom line in higher education institutions

One key method to achieve environmental sustainability in higher education is to reduce the adverse impacts of campus development and daily operations on the environment (Abubakar et al., 2016). Universities should promote campus sustainability by formulating appropriate policies and strategies, and encouraging communities to take sustainable actions to minimise environmental pollution (Roos et al., 2020).

3.2 Principles for Responsible Management Education

The aim of the PRME is to create and promote some new ideas of responsible management education that can nurture responsible future leaders to foster global sustainable development (Henderson & Wilson, 2023). To achieve this goal, the PRME provides effective solutions for educators to shape future leaders with knowledge and skills by leveraging the educational characteristics of higher education institutions (Buono et al., 2015). Therefore, although the PRME's introduction primarily targets educational or academic institutions and is closely related to cultivating sustainable student leadership, teachers play a crucial role in successful implementation as the link between organisations and students (Kalsoom & Qureshi, 2021).

Since the development of higher education teachers' sustainable leadership is driven by the sustainability challenges faced by institutions (Buszard & Kolb, 2011), the PRME plays an important role in this study as a catalyst of the basic theory of sustainable development in higher education organisations and for training future decision-makers (Chiang & Chen, 2022; Parkes et al., 2017). Therefore, the comprehensive 6+1 PRME framework proposed by Assumpção and Neto (2020), which includes Purpose, Value, Method, Research, Partnership, and Dialogue, is adopted in this study, along with an additional principle, Operation.

Purpose, Value and Method can serve as practical pathways to drive educational reform in schools, representing the role of higher education teachers in fostering students' abilities, transforming learning methods, and updating the professional curriculum content (Alcaraz et al., 2011). Research is regarded as an essential component for teachers to exert influence on higher education institutions' sustainable development, emphasising the value of academic research in the fields of a sustainable economy, society and environment (Godemann et al., 2014). Additionally, Partnership and Dialogue deepen stakeholders' common understanding of actions, particularly focusing on the different roles played by higher education teachers when faced with sustainability challenges (Godemann et al., 2014). The supplementary principle of Operation implies the involvement of higher education teachers in organisational practices, serving as role models in conveying values and attitudes (Houston et al., 2023). These elements represent higher education

teachers' professional characteristics, revealing their unique role in the development of sustainable leadership.

4. Results

4.1 Definition of the Concept of College Organisational Sustainability

The concept of organisational sustainability needs to be defined in order to understand the meaning of higher education organisations' sustainability. At its core, organisational sustainability involves balancing the economic, social and environmental systems in business operations (Mohd Zawawi & Abd Wahab, 2019) in order to ensure that organisations achieve prosperity, while meeting their future needs (Colbert & Kurucz, 2007). This means that they need to embrace leadership and management principles of sustainable development in order to achieve a comprehensive economic, social and environmental performance (Kantabutra, 2020). In summary, organisational sustainability seeks relative equilibrium in the domains of TBL to exert a positive impact on the sustainable development of social welfare (Mensah, 2019).

When researching the sustainable development of higher education, organisational issues are often found to entail the integration of sustainability into institutional activities in order to drive universities toward greater sustainability (Weisser, 2017). As emphasised by the United Nations Educational, Scientific and Cultural Organisation in the Global Action Programme on Education for Sustainable Development, higher education institutions should prioritise the adoption of a holistic approach. This not only involves playing a role in teaching content related to sustainable development, but also actively taking part in the organisation's sustainability practices, such as managing facilities, governance structures, and fostering a culture of sustainability (Yáñez et al., 2019). By effectively managing the environment, higher education institutions can achieve economic prosperity, and disseminate the principles of energy conservation, waste reduction, and promoting social equity and justice in society (Alshuwaikhat & Abubakar, 2008).

As social institutions, higher education organisations should demonstrate their commitment to sustainable development to rectify any unsustainable behaviour and take more sustainable and responsible actions to influence the economy, society and the environment to ultimately achieve systemic change (Argento et al., 2020). In other words, they can generate additional competitive advantages using the TBL (Batista & Francisco, 2018). By improving resource efficiency, achieving more economically-efficient, environmentally-friendly, and competitive development, they can promote social cohesion and cultural growth (Salvioni et al., 2017). However, such efforts will also bring tremendous pressure to higher education organisations, forcing them to collaborate with stakeholders to create and implement knowledge, tools, and social changes that promote sustainability (Trencher et al., 2017).

Therefore, adjusting and restructuring education, research, operations, outreach, teachers' development, students' opportunities, institutional administration, mission, and planning are all widely recognised as the primary organisational forms for higher education institutions to achieve sustainable development (Mapar et al., 2022; Menon & Suresh, 2020). However, it is proposed in this study that students' opportunities and teachers' development can collectively be perceived as a campus experience based on individuals' behavioural experience among internal stakeholders, while institutional administration, mission and planning represent assessment models stemming from institutional frameworks (Findler et al., 2018; Lozano et al., 2013). This forms a theoretical basis for organisational sustainability in higher education, including education, research, campus operations, campus experience, community outreach, and assessment reporting. Among these, education includes curriculum, programmes, reviews, and interdisciplinary approaches, research includes publications, patents, new knowledge, and holistic thinking used in teaching, while campus operations encompass energy efficiency, waste, transportation, equality and diversity, and community outreach entails communication initiatives, collaborative research, partnerships, and

community-orientated open activities (Findler et al., 2018; Lozano et al., 2013).

It is believed in this study that the essence of organisational sustainability in higher education institutions manifests itself in two main ways. Firstly, it involves a sense of obligation to lead by example, by improving the sustainability of campus operations and campus experiences, implementing regulatory systems for sustainability assessment reports, and minimising the negative impact generated by the institution itself (Velazquez et al., 2006). Secondly, it entails leveraging its primary functional characteristics via sustainability-related education, research, and community outreach, thereby exerting a more profound influence on societal sustainable development lifestyles and indirectly fulfilling responsibilities to protect the environment, ensure social justice, and promote economic sustainability (Puertas & Marti, 2019).

4.2 Conceptual Definition of Sustainable Leadership for Higher Education Teachers

When defining higher education teachers' sustainable leadership, it is essential to consider the characteristics of the environment in which these leaders operate (Boiral et al., 2014). When they analysed teachers' leadership, Katzenmeyer and Moller (2009) proposed the concept of dual leadership for higher education teachers, both inside and outside the classroom. They supported a community comprised of teachers, students and stakeholders, who contributed to it by influencing others to improve their educational practices and take leadership responsibility. On the other hand, embedding sustainable leadership emphasises the ability to meet the needs of both the direct and indirect stakeholders of the organisation without compromising the organisation's ability to fulfill its future mission (Kantabutra & Saratun, 2013). This study is based on the aforementioned perspective to define the concept of sustainable leadership for higher education teachers.

Higher education organisations' stakeholders primarily include academic administrators (such as deans and department heads), professors, researchers and students (Lozano, 2006). Among these, professors and researchers can be collectively referred to as teachers to emphasise their crucial leadership role in bridging decision-making in school management and practical teaching in the classroom (Heck & Hallinger, 2009). Aligned with SDG 4, ensuring that all learners acquire knowledge and skills needed to promote sustainability by 2030 (Hák et al., 2016), higher education organisations should encourage their teachers to incorporate sustainability principles into their professional development plans (Filho, 2017). Based on the PRME's principles of responsible decision-making and sustainability thinking (Haertle et al., 2017), higher education teachers should actively engage in the organisation's sustainability transformation and demonstrate their sustainable leadership, while imparting sustainable development knowledge (Yáñez et al., 2019).

In the classroom, higher education teachers should actively respond to incorporating the purposes and values of sustainability into education and teaching by imparting the knowledge and skills required for sustainable development to students (Hák et al., 2016). They should use innovative educational methods based on innovative research knowledge to help students to shape awareness and attitudes as future sustainable citizens (Ceulemans & Severijns, 2019) to address the challenges of sustainable social development (Farner, 2019). Outside the classroom, they should establish partnerships in order to lead stakeholders toward a shared vision and a common mission for sustainable development (Cebrián et al., 2013). They should engage in dialogue to promote community development, highlighting and addressing sustainability issues (Bolger, 2021; Farner, 2019), and apply systemic thinking to address complex contradictions, conflicts and issues in economic, social and environmental aspects of campus operations (Ploum et al., 2017).

Based on the above discussion, sustainable leadership for university teachers is defined in this study as teachers' ability to lead and influence students, colleagues and other stakeholders in educational practice. They should actively focus on achieving sustainable development goals, and possess a sense of social responsibility and awareness of sustainability. By integrating the PRME into education, research and community service, university teachers will promote the balanced development of their organisations (Kadji-Beltran et al., 2013).

4.3 Correlation models

The aim of this study was to use the PRME as the foundational theory for sustainable leadership among university teachers and to utilise the TBL to evaluate the organisational sustainability transformation within universities. It seeks to explore the correlation between organisational sustainability and sustainable leadership among university teachers by analysing the roles of the TBL and the PRME in practice. Previous researchers have already confirmed that a close connection exists between the TBL and the PRME. This relationship not only stems from their shared principles of optimising stakeholders' objectives, but is also manifest in their common pursuit of achieving sustainable development goals (Beck & Ferasso, 2023). These findings provide a rationale for establishing relevant correlation models in subsequent studies.

As highlighted by Nwagwu (2020), the PRME plays a crucial role in advancing sustainable development goals. University teachers practice sustainable leadership, balance the demands of Purpose, Value, Method, Research, Partnership, Dialogue and Operation to ensure the sustainable economic, social and environmental development of higher education institutions (Buszard & Kolb, 2011). The aim of the PRME is to optimise stakeholders' value and social and environmental welfare by responsibly formulating strategies, implementing actions, and governing properly instead of simply pursuing the maximum profit (Laasch & Moosmayer, 2015). This indicates that sustainable leadership among university teachers, defined based on the PRME, creates sustainable economic, social and environmental value to uphold the TBL rooted in higher education institutions' sustainability (Schüz, 2012). Similarly, the TBL's emphasis on integrating social, environmental, and economic factors into organisational decision-making processes is aligned with the responsible management education objectives of the PRME (Ceulemans et al., 2022). Therefore, the integration of the TBL into research, assessment and decision-making with regard to higher education organisations' sustainability can foster more stakeholder-orientated sustainable leadership among university teachers based on the PRME (Abdelgaffar, 2021).

Based on this theoretical framework, the present study establishes a model of the correlation between the sustainability of higher education institutions and the sustainable leadership of university teachers, comprising three important dimensions, as depicted in Figure 1. The first dimension is founded upon the TBL of economic, social and environmental bottom lines (Amaral et al., 2015), while the second dimension is based upon the specific manifestations of the sustainability of higher education institutions, encompassing education, research, campus operations, community outreach, assessment reporting, and campus experience (Lozano et al., 2013), and the third dimension is anchored in the principles advocated by the PRME, namely Purpose, Value, Method, Research, Partnership, Dialogue and Operation, representing the core characteristics of university teachers' sustainable leadership (Houston et al., 2023).

According to this model, as higher education institutions advance toward the achievement of sustainable development goals, university teachers' sustainable behavioural patterns can be cultivated by learning and cooperating with both internal and external stakeholders in order to promote sustainability (Lozano, 2008). At the same time, sensitively handling environmental and social issues can motivate university teachers to continually refine their sustainability values (Ramona-Diana, 2014). As these factors constitute the premise and foundation of the establishment of this model, changes in the first dimension will have a significant impact on the development of the third dimension.

A nonlinear causal relationship is observed between the second and third dimensions due to the effect of sustainable practices on the shaping of sustainable leadership among university teachers in higher education institutions (Kholiavko & Didenko, 2023). On the educational front, higher education institutions provide courses, projects and activities that inspire teachers, giving them a sense of purpose, causing them to discover the enormous value of sustainable development, thereby driving the optimum method to integrate this concept into teaching and student guidance (Khadim et al., 2022). Additionally, the sustainable practices of higher education institutions provide teachers

with more opportunities to engage in related research that can help them to understand the trends and challenges in the field of sustainable development, thereby enhancing their pursuit of research that can have an academic impact (Elangovan & Hoffman, 2021).

In terms of campus operations, higher education institutions can incorporate sustainability principles into these operations, functions and actions to enable teachers to recognise the importance of sustainable development in fulfilling their responsibilities and promoting the cultivation of ideal values and methods (Menon & Suresh, 2020). At the same time, this is also manifest in university teachers' involvement in campus sustainable development projects and initiatives (Sawalkar et al., 2023). Additionally, higher education institutions can deepen teachers' understanding of sustainable cooperation and partnerships by collaborating with local communities to conduct sustainability projects (Yazid et al., 2023).

Moreover, university teachers can better understand the effectiveness of the outcomes of their institution's sustainability practices by the formation and implementation of assessment reports as a basis for operations and decision-making, and the integration of sustainable development principles and methods into their daily work (Weng et al., 2019). It is worth noting that the influential relationship between the second and third dimensions is not unidirectional. In other words, the level of university teachers' sustainable leadership largely determines the extent to which their organisation successfully implements sustainability (Brandt et al., 2019; Ferreira et al., 2007; Vare et al., 2019). Therefore, it is crucial for higher education institutions to cultivate educators with sustainable leadership skills to achieve sustainability (Kalsoom & Qureshi, 2021).

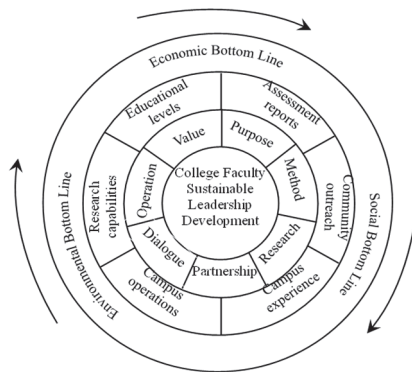


Figure 1: Model of correlation between the sustainability of higher education institutions and the sustainable leadership of university teachers

5. Discussion

5.1 Exploring the connotations of College Organisational Sustainability

In the context of global change, institutionalisation and organisational growth create immense wealth and prosperity for the world, but they also engender social threats and significant environmental degradation (Nawaz & Koç, 2018). In this process, deeply rooted in their regions and closely connected to the world, higher education institutions collaborate with faculty, students and broader groups of stakeholders to provide vital opportunities to achieve sustainable development goals (Findler et al., 2019; Trencher et al., 2014). Especially as the SDGs have identified sustainable development education as a driver of the implementation of other objectives, higher education institutions are gradually moving toward institutionalised sustainable development, with their teachers actively seeking a transition toward mutually beneficial sustainable leadership (Mazon et al.,

2020; Tabucanon et al., 2021).

Influenced by organisational characteristics and missions (MacDonald, 2009), authors of related studies generally suggest that higher education institutions can typically maintain sustainability principles by promoting models that emphasise environmental protection and intergenerational equity (Amaral et al., 2015). Their social impact is also primarily focused on expanding specific courses and projects related to sustainability (Brundiari & Wiek, 2011). However, it is argued in this study that higher education institutions should equally emphasise their economic competitiveness and operational value as they are integral parts of sustainable independent organisations and regions. This view is also supported by Caeiro et al. (2020), who suggest that, as a comprehensive development model, organisational sustainability requires higher education to maintain holistic attention across all activities.

On this basis, the sustainability of higher education institutions should aim to protect the environment, ensure social justice, and promote sustainable economic growth (Puertas & Marti, 2019). Grounded in the TBL theory, this study seeks to clarify the specific economic, social and environmental bottom lines that are applicable to the higher education sector. The institutionalisation of sustainability in higher education is reflected internally in organisations by campus operations, campus experience and assessment reports. The social responsibility of higher education institutions' sustainability is externally demonstrated by education, research and community outreach. This comprehensive delineation of the concept of higher education institutions' sustainability constitutes the first objective of this study.

5.2 Exploring the connotations of Higher Education Teachers' Sustainable Leadership

The second objective of this study is to define the concept of higher education teachers' sustainable leadership by highlighting professional characteristics as a principle. Teachers play a crucial role in promoting environmental and social well-being in higher education institutions as "internal entrepreneurs", (Brinkhurst et al., 2011). Therefore, it is essential for higher education teachers to possess sustainable leadership skills to facilitate societal change (Cebrián & Junyent, 2015). Dyer and Dyer (2017) proposed that higher education teachers' core task is to educate students and generate new knowledge that is beneficial to society; hence, the key aspects of their sustainable leadership are education, learning and research. However, policies and practices of educational reform commonly recognise that teachers play a pivotal role in the school's restructuring process by assuming the responsibility of driving organisational sustainability with their sustainable leadership (Shen et al., 2020).

It is argued in this study that the concept of higher education teachers' sustainable leadership not only encompasses the integration of sustainability principles into the educational goals, curriculum, teaching and research of universities, but also the application and practice of teachers' involvement in higher education institution management. This perspective is aligned with that of Pineda-Báez et al. (2020), who suggest that the essence of teachers' leadership lies in influencing, mobilising and motivating peers and other members of the organisation by a moral stance to improve the operational conditions of the school and enhance the quality of students' learning. Therefore, the concept of higher education teachers' sustainable leadership is proposed based on the PRME, which includes establishing colleagues' norms, cherishing leadership opportunities, taking the lead in teaching, and promoting the school's development. On the one hand, this concept clarifies higher education teachers' sustainability based on their professional development, including purpose, values, methods and research. On the other hand, it elucidates the sustainability of higher education teachers as functional employees by emphasising dialogue, operations and partnerships.

5.3 Exploring the Correlations

According to Cook (2014), based on clarifying the relevant concepts, higher education teachers' sustainable leadership plays a crucial role in shaping and consolidating a culture of sustainable

development in higher education institutions. At the same time, the development and maintenance of sustainability in higher education organisations and higher education teachers' sustainable leadership hold equal importance. This study is based on exploring the theoretical connection between the TBL and the PRME and producing a model to illustrate the correlation between higher education organisations' sustainability and higher education teachers' sustainable leadership.

A variety of factors, including education, research, campus operations, campus experiences, community outreach, and assessment reports are involved in the pursuit of the economic, social and environmental sustainability of higher education organisations. These factors affect different aspects of higher education teachers' sustainable leadership in a nonlinear causal relationship, which include Purpose, Value, Method, Research, Partnership, Dialogue and Operation. Moreover, as this relationship is not unidirectional, the development of higher education teachers' sustainable leadership also enhances the sustainability of higher education organisations in return.

However, the practice of sustainable leadership among teachers in the higher education sector is currently faced by numerous challenges (Khadim et al., 2022), constrained by the imperfect implementation of sustainable development principles within higher education institutions (Hinduja et al., 2023). University teachers' willingness and motivation for change are subject to multiple constraints, including a lack of organisational support, inadequate emphasis, unclear mission, lack of inclusivity, and constraints imposed by growth paradigms (Leal Filho et al., 2020). These factors directly hinder the development of university teachers' sustainable leadership. To address this issue, based on the correlation between the sustainability of higher education organisations and university teachers' sustainable leadership revealed in this study, some recommendations are proposed below.

Firstly, universities should establish a robust organisational culture that integrates the concept of sustainable development into campus operations and experiences, implementing it in decision-making and policies to cultivate university teachers with a sustainable development mission and values (Halmaghi et al., 2023). According to Alkhayyal et al. (2019), a positive outcome can only be achieved by a willingness to contribute to organisational sustainability and the value of sustainable development. This requires all stakeholders to make a concerted effort particularly by changing their educational behaviour (Adams et al., 2018). Universities should provide continuous professional development opportunities for teachers to enhance their understanding of sustainability knowledge, thereby improving their research literacy and educational capabilities (Chaaban et al., 2023).

Secondly, universities should improve communication pathways from within and without, from top to bottom. There is particular emphasis on the importance of engaging with society, especially in establishing partnerships and projects with local communities (Leal Filho et al., 2019). By engaging in public relations efforts, university teachers can share sustainable development actions and related outcomes by utilising online communication platforms to reach out to a wide range of stakeholders and access more resources (Amey et al., 2020). At the same time, university administrators should value teachers' voices and participation in order to foster an open, inclusive management atmosphere to stimulate innovation and a sense of change in teachers' sustainable leadership (Han et al., 2020).

6. Conclusion

This study, which is grounded in the theories of the TBL and the PRME, integrates the unique characteristics of higher education and uses a literature review approach to define the concepts of sustainability in higher education organisations and higher education teachers' sustainable leadership. A model is also produced to illustrate the correlation between these two concepts. This exploration not only makes a substantial contribution to refining the theoretical framework in the higher education field, but it also opens up new avenues for empirical research and lays the groundwork for future related studies. Ultimately, its aim is to promote long-term social sustainability by providing a solid theoretical foundation to guide empirical investigations.

By clarifying the concepts of sustainability in higher education organisations and higher education teachers' sustainable leadership, this research provides concrete guidance and a firm

direction for university administrators to promote organisational sustainability. This not only helps administrators to better fulfil their responsibilities, but also provides teachers with a clearer definition and awareness of the responsibility of their role. By fostering teachers' sustainable practices in teaching and management, this research contributes to the practical advance of sustainability in higher education. It supports the construction of a more sustainable education system in the future by encouraging action toward sustainability and providing robust support for sustainable development in higher education.

7. Limitations

Although this study has made every effort to investigate the sustainability of higher education institutions and college teachers' sustainable leadership, it is constrained by its sole reliance on a review of English literature, potentially overlooking relevant findings in other languages by authors with different cultural backgrounds. Additionally, the selection of specific indexed journal databases may have excluded viewpoints published by unconventional channels. Furthermore, certain emerging trends may not have been covered in time due to the rapid development of the sustainability field. These factors collectively could have resulted in a biased review of the literature. Therefore, future researchers should aim to expand the sources and timeframe of the literature review and include multilingual publications selected from unconventional channels, to more comprehensively explore the concepts of sustainability in higher education institutions and college teachers' sustainable leadership, together with their relevance.

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