

GLOBAL CITIZENSHIP BEHAVIOR AND INSTITUTIONAL SUSTAINABILITY PRACTICES IN HIGHER EDUCATION: A MIXED-METHODS EXPLORATION

Ghulam Zainab Sherazi

Lecturer, Institute of Education, University of Sargodha, Sargodha

Email: ghulam.zainab@uos.edu.pk

Asma Khizar

Assistant Professor, Institute of Education, University of Sargodha, Sargodha

Email: asma.khizar@uos.edu.pk

Hafiz Muhammad Saleman Naveed

School Education Department, Punjab, Gujranwala.

Email: salmanvd01@gmail.com

***Muhammad Nadeem Anwar**

Corresponding Author

Associate Professor, Institute of Education, University of Sargodha

Email: nadeem.anwar@uos.edu.pk

Abstract

Global citizenship empowers individuals to recognize their role in shaping a shared future, fostering cultural understanding, social responsibility, and environmental stewardship. Global citizenship enables individuals to recognize their impact on the global community, foster cultural understanding and appreciation, embrace social responsibility, and promote environmental stewardship. This study was used to assess the current state of teachers' Global Citizenship Behavior (GCB) and Institutional Sustainability Practices (ISP) in higher educational settings by using mixed-methods design. 360 teachers from 6 public universities were selected using multistage sampling technique. GCB of teachers was gauged through Global Citizenship Scale created and validated by Morais and Ogden, whereas ISP were assessed with the help of AASHE (2020) and UNESCO (2017) frameworks, a questionnaire was developed and validated. Quantitative analysis revealed a moderate level of GCB among university teachers, with global competence scoring the highest. Conversely, universities demonstrated a high level of sustainability practices, predominantly in the domain of research initiatives and student engagement. A statistically significant difference found by applying t-test which exposed a gap between teachers' level of GCB and ISP. A qualitative approach in terms of semi-structured interviews with senior faculty members was initiated to address the gap. Interview respondents have pointed out the lacking of structured training, weedy policy orientation, and inadequate incentives as foremost roots of the gap. The study concludes that faculty development programs, integration of global citizenship values into sustainability policies, and inclusion of GCB indicators in promotion and performance systems are essential for building more globally responsible and sustainable universities. The study suggested to foster globally responsible and sustainable higher education, it is evitable three key strategies are essential including organized faculty development programs for enhancing educators' capacity to promote GCB, embedding global citizenship values in institutional policies, and incorporating GCB indicators to incentivize and recognize responsible practices. By adopting these strategies, higher education institutions can cultivate a culture of global responsibility and sustainability.

Keywords: Global citizenship behavior, sustainability practices; higher education institutions

Introduction

Global citizenship (GC) as a multilayered concept surrounding interrelated networks of knowledge which deals with understanding global issues and complexities, beliefs which reflect values and principles guiding individual actions, and actions pertaining to practices and

behaviors demonstrating global responsibility. Scholars label GC into two key domains, one is including attitudinal and other behavioral (Bamber, 2019; Horey et al., 2018). The environmental, social, and economic behaviors of people and communities who acknowledge that all people are global citizens are referred to as global citizenship (GC). It entails realizing how interrelated the world's problems are and accepting accountability for bringing about constructive change (Reysen & Kaczarska-Miller, 2013; UNESCO, 2017). GC empowers people to identify their role and responsibilities in formative a shared future, nurturing understanding about cultural norms, knowledge of social responsibilities, and environmental stewardship (Campbell Pickford & Joy, 2016). A discussion paper entitled "Understanding Global Citizenship" by Lissah, (2023) explicated GC in term of:

- a. Respect for Diversity: Honoring a range of viewpoints and life experiences
- b. Social Responsibility: Making a positive impact on the world
- c. Active Participation: Taking part in projects related to justice, peace, and sustainable development

Despite differing opinions, its significance in education is broadly recognized, and in recent decades, it has increasingly gained prominence in higher education. As societies confront interconnected challenges such as climate change, social injustice, cross-cultural tension, and depletion of resources academics, teachers, and policy makers are asking universities to do more than just provide knowledge in the field; they are asking them to cultivate globally active, ethically informed citizens who act beyond national and local interests (Ruiz-Mallén et al., 2022; Michelsen & Adomßent, 2022). Global Citizenship Behavior (GCB) encompasses the dispositions, attitudes, values, and actions of individuals who acknowledge their interconnectedness. It involves engaging in civic responsibilities that extend beyond national boundaries, demonstrating concern for social justice, cultural diversity, and environmental sustainability, and acting in accordance with these principles (Morais & Ogden, 2011).

Parallel to this, sustainability has evolved as a core priority for higher education institutions (HEIs). Sustainability practices in universities include but are not limited to—adoption of sustainable campus operations (e.g., energy, waste, green procurement), curricular embedding of sustainable development goals (SDGs), research directed at environmental and social sustainability, and community engagement that addresses global and local environmental challenges (Ruiz-Mallén et al., 2022; Nagy & Veresne Somosi, 2022). Integration of sustainability in higher education is often considered essential to prepare graduates for an uncertain future, and to ensure that university operations themselves do not undermine the ecological or social systems upon which they depend (Cortese, 2003; Lozano et al., 2015; Tilbury, 2011; Leal Filho et al., 2016; Barth et al., 2007).

However, while both global citizenship and sustainability are well established as individual areas of inquiry, relatively less is known about how Global Citizenship Behavior among higher education faculty or staff correlates with, contributes to, or possibly shapes sustainability practices within their institutions. Do teachers who demonstrate strong global citizenship also work in universities that are more advanced in sustainability? How do institutional policies, culture, resources, incentives or barriers mediate that relationship? These questions are especially pertinent in contexts like Punjab, Pakistan, where higher education is expanding, environmental issues are acute, and where universities are recognized as potential levers for social transformation and sustainable development.

Rationale of the Study

There are several reasons why exploring the GCB and sustainability practices in HEIs, some of these are: in 2015, member states of the United Nations adopted the 17 Sustainable Development Goals. Education, especially higher education, has been assigned an important

role in achieving many of these goals, through both formal curriculum (Goal 4: Quality Education; Goal 13: Climate Action; Goal 12: Responsible Consumption and Production) and informal institutional practices. HEIs are expected to not only disseminate knowledge about sustainability but also to model sustainable behaviour. Likewise, global citizenship education (GCE) is increasingly framed as necessary to bridge local and global perspectives, fostering attitudes and behaviours of responsibility toward global challenges (Ruiz-Mallén et al., 2022). Much of the literature on global citizenship in HEIs has focused on students: their skills, awareness, identity orientation, or perceptions. For example, a study in Pakistan investigated global citizenship skills among students and found variation in social responsibility, global competence, and civic engagement tied to identity orientations (Buzdar et al., 2023). Similarly, research looks at how students view higher education intuitions' sustainability efforts and initiatives. Nevertheless, there has been insufficient focus on faculty as key actors, specifically regarding their behaviors, dispositions, and the ways in which these factors may either support or obstruct institutional sustainability initiatives. Teachers are pivotal agents because they tend to design curricula, conduct research, guide students, and affect decision-making. Without insight into their global citizenship behaviour, institutions risk not being able to mobilize internal human capital towards sustainability.

Higher education institutions are involving multiple stakeholders. Sustainability practices depend heavily on institutional leadership, culture, policy frameworks, funding, governance, as well as faculty buy-in. Studies of global citizenship education and sustainability indicate that institutional culture and policy are enablers or obstacles (Ruiz-Mallén et al., 2022). Understanding how GCB interacts with institutional structures (e.g., policies, administration, incentives) becomes essential. Pakistan, and particularly the province of Punjab, faces specific environmental, social, and educational challenges. These include resource constraints, environmental degradation, pollution, water crises, and growing population pressures. HEIs in this region are increasingly expected to respond, but vary widely in their sustainability practices and global orientation. The objectives were

- To assess the level of Global Citizenship Behaviour among teachers in higher education institutions
- To assess status of Institutional Sustainability Practices in higher education
- To address the gap between Global Citizenship Behavior of teachers and Institutional Sustainability Practices of higher education

Conceptual Framework

The figure is presented conceptual framework which illustrates the description of Global Citizenship Behavior (GCB) and Institutional Sustainability Practices (ISP). It highlights how teachers' GC attitudes and actions underwrite to promote sustainable practices in higher educational institutions. It exposes that the GCB of teachers acts as a reagent for consolidation sustainability within educational institutions. By nurturing socially responsible, competent, and civically engaged educators, institutions can achieve enduring sustainability outcomes.

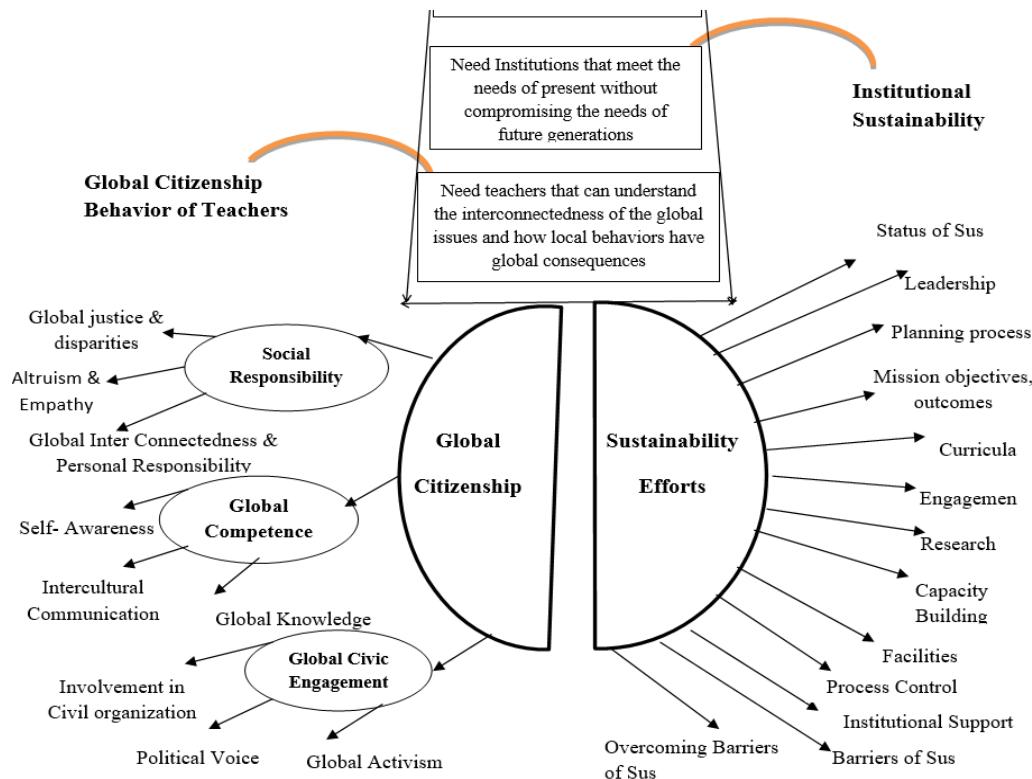


Figure: Conceptual Framework

Methodology

Research Design

Mixed-methods research design aims for accurate and reliable measurements where analysis sought to do quantitatively and qualitatively. This design was guided by Creswell and Plano Clark's (2018) recommendation that mixed-methods research provides a more complete understanding of complex educational phenomena by combining numerical trends with participants lived experiences. The present study, quantitative approach was used to examine the level of GCB among higher education teachers and the existing status of higher education institutional sustainability practices (Objectives 1 and 2), whereas the qualitative approach employed to explicate and validate finding revealed through quantitative approach and to explore respondent perspective regarding bridging the gap between GCB and sustainability practices in higher education institutions (Objective 3).

Population and Sampling

There were thirty-four public universities in the province of Punjab out of which twenty-nine were public sector general universities (HEC, 2019). Fraenkel et al. (2012) defined the population as the large group to which the researcher is interested in applying the results. All faculty members working in general universities in Punjab constituted the study population. The target population consisted of all teacher working in public sector general universities in Punjab, Pakistan. Teachers were taken because they are key agents of change. They impact all the instructional components such as curriculum design, teaching-learning practices, institutional culture, and student engagement in global and sustainable practices (Morais & Ogden, 2011; Ruiz-Mallén et al., 2022).

To select a representative group of respondents, multistage sampling technique which was included both probability and non-probability techniques of sampling. As the combination of probability and non-probability sampling techniques aligns with Creswell and Plano Clark

(2018), who believe that flexibility in mixed-methods research to imprisonment the scope of data. Therefore, at first stage, the researchers randomly selected six universities in such a way that two public sector general universities from northern Punjab (Fatima Jinnah Women University and University of Gujrat), two from southern Punjab (Bahauddin Zakariya University, Multan, and Islamia University, Bahawalpur), and two from central Punjab (University of the Punjab and Government College University, Faisalabad). At second stage, six departments (three from each Sciences and Social Sciences) were purposively selected. At third stage, ten faculty members were conveniently selected from each department. Henceforth, the sample size comprised 360 teachers, which is an adequate for quantitative analyses (Cohen, Manion, & Morrison, 2018). Moreover, for semi-structured interview two senior most faculty members from each sampled department (one from each science and social sciences) were conveniently taken to have qualitative data.

Research Instruments

Both quantitative and qualitative data were necessary to achieve the objectives and answer the research questions of this study. Therefore, three research instruments were employed for this purpose. The Global Citizenship Questionnaire, developed by Morais and Ogden (2011) was used to measure teachers' global citizenship behavior with permission from the authors. It has been widely validated in higher education contexts (Wagener, Smith, & Frantz, 2023). Additionally, a self-constructed questionnaire was formed to assess the sustainability practices in higher education institutions. The questionnaire covered four domains including curriculum and pedagogy (integration of sustainability concepts in teaching), campus operations (energy conservation, waste management), research and innovation (sustainability-related projects and funding), and community engagement (partnerships and outreach activities). The instrument was developed based on frameworks from the Association for the Advancement of Sustainability in Higher Education (AASHE, 2020) and UNESCO's Education for Sustainable Development guidelines (UNESCO, 2017). To address the link between GCB and ISP, a semi-structured interview protocol was developed which was included set of questions use to examined gaps and documented recommendations for filling and strengthening such gap. The interview guide underwent expert review for validation to confirm its relevance.

Data Analysis

To measure the level of teachers' GCB (objective-1), and the status of Institutional Sustainability Practices within HEIs (objective-2), quantitative data were gathered and then analysed using SPSS. For such purpose, descriptive statistics like means, standard deviations, and frequencies were reported. The results were categorized into levels (*low, moderate, high*) based on percentile rankings. Qualitative data from interviews were analysed through thematic analysis, follow by Braun and Clarke's (2019) six-phase framework. NVivo software was used to assist with coding and data management. Emerging themes were used to validate and interpret the quantitative findings, providing insights into how the identified gaps between GCB and sustainability practices could be addressed. Triangulation of data enhanced the overall credibility and validity of the study (Creswell & Plano Clark, 2018).

Results

a. Quantitative Phase: To determine the level of GCB among teachers in higher education institutions, perception of university teachers was analyzed and the level of their global citizenship behavior was established as mentioned in table-1.

Table-1: Level of Global Citizenship Behaviour (GCB) among Teachers

Indicators	A %	SA %	A+SA %	N %	SD %	D %	SD+D %	Mean	Level
Overall GCB level	48	17	65	19	3	13	16	3.60	Moderate
Social Responsibility	43	20	63	16	5	17	22	3.54	Moderate
Global Competence	51	15	66	21	2	11	13	3.64	Moderate
Global Civic Engagement	50	15	65	22	2	11	13	3.63	Moderate

Table showed that, all three indicators pertaining to Global Citizenship Behaviour including Social Responsibility (Mean =3.54), Global Competence (Mean =3.64), Global Civic Engagement (Mean =3.63) yielded a moderate level of Global Citizenship Behaviour among Teachers of higher education institutions. However, overall GCB mean score was found to be 3.60, which falls within the moderate level range and this suggests that higher education teachers generally demonstrate a moderate degree of global citizenship behaviors.

To assess status of institutional sustainability practices in higher education, perception of higher educational teachers was analyzed and the status of sustainability practices in higher education institutions was established as mentioned in table-2.

Table-2: Status of Institutional Sustainability Practices (ISP) in Higher Education

Indicators	A %	SA %	A+SA %	N %	SD %	D %	SD+D %	Mean	Level
Overall, ISP Level	52	16	68	21	2	9	11	3.69	High
Guidance and engaging students in sustainability	54	19	73	19	2	6	8	3.82	High
Sustainability initiatives and research	55	17	72	21	2	5	7	3.78	High
Capacity building for sustainability	54	14	68	22	2	8	10	3.69	High
Laboratories, computing and institutional facilities	39	13	52	25	6	17	23	3.35	Moderate

Table-2 depicted that, all four indicators about sustainability practices such as “Guidance and engaging students in sustainability” (Mean =3.82), “Sustainability initiatives and research” (Mean =3.78), and “Capacity building for sustainability” (Mean =3.69) yielded a high level of Sustainability Practices in higher education institutions. While “Laboratories, computing and institutional facilities” (Mean =3.35) generated a moderate level of Sustainability Practices in higher education institutions. However, overall Sustainability Practices mean score was found to be 3.69, which falls within the high-level range and this suggests that a high degree of Sustainability Practices in higher education institutions.

To measure the gap between Global Citizenship Behavior of teachers and Sustainability practices of Institutions of Higher Learning, t-test was applied as mentioned in table-3.

Table-3: Gap between Global Citizenship Behavior and Sustainability Practices

Indicators	Mean	SD	T	df	P value
Global Citizenship Behavior	3.62	0.4409	-	359	0.000
Sustainability Practices	3.71	0.5170	4.154		

Table 3 revealed that paired samples *t*-test results showed that a significant gap was found ($t = -4.154$ and $p = 0.000$) between global citizenship behavior of teachers ($M = 3.62$, $SD = 0.4409$) and sustainability practices of higher education institutions ($M = 3.71$, $SD = 0.5170$).

b. Qualitative Phase: To address the gap between Global Citizenship Behavior of teachers and Sustainability Practices of Institutions of Higher Learning, semi-structured interview was conducted ($n=120$). Results of the quantitative phase indicated that there exists a significant gap between global citizenship behavior of teachers and sustainability practices of higher education institutions i.e. the level of sustainability efforts of these institutions is higher than the existing global citizenship behavior of teachers.

During their interview most of the senior faculty members (89%, $f = 107$ of 120) verified that the level of global citizenship behavior of university teachers is not compatible with the sustainability efforts of the higher learning institutions. They also highlighted some potential reasons for this gap. Despite the fact that the university teachers have the opportunity to attend conferences and seminars both at national and international levels and observe different sessions on global issues like global citizenship behavior, particularly the social scientists. However, it is a matter of serious concern that they do not adopt these behaviors for certain reasons.

For example, a 55 years male professor, who has 25 years' experience of teaching in the higher learning institutions, stated:

“They research in these fields is just for the sake of research i.e. to increase their number of published articles to meet their promotion criterion. They discuss these issues just for discussion as a formality and to practice these values is not their priority.” (Respondent No. 36)

The senior faculty members pointed out that the higher learning institutions have not developed any solid mechanism to promote this value and incarnate it as part of their behavior. It is being dealt as a private matter and no monitoring or assessment system is there officially.

Talking about the situation a female associate professor of 48 with 20 years of teaching experience said that:

“Although the indicators of both variables are directly associated with each other but there is no practical alignment or connection between global citizenship behavior of teachers and the sustainability efforts of higher learning institutions....they are freely floating in the see on their own directions.”
 (Respondent No. 28)

The informants also asserted that the global citizenship is a behavior, and behaviour change demands training and practice coupled with conducive environment to flourish these values. On the other hand, it is a commonplace that higher learning institutions do not conduct specialized trainings on regular basis to instill citizenship behaviour among their teachers.

Suggested Measures to Bridge the Gap

During the interviews, the senior faculty members of higher learning institutions were asked to suggest some relevant measures to bridge this gap. The respondents mainly stressed upon taking following measures to bridge the gap between global citizenship behavior of teacher and the sustainability efforts of the higher learning institutions.

i. Training of teachers

The senior faculty members (72%, $f = 86$ of 120) stressed upon a specialized training on regular basis as part of the faculty development programme at university level with the focus on outcome-based practicum embedded in affective domain of learning. Explaining his viewpoint a 52 years old associate professor, from social sciences, maintained that:

"Global citizenship is a universally accepted value and it is concerned with the human behavior. Behavior change is a hard nut to crack. It cannot be actualized by merely conducting workshops, seminars or conferences. It needs training; training in a peculiar environment; with some predefined outcomes." (Respondent No. 78)

Another female professor of 49 said:

"In my opinion prominent indicators of global citizenship behavior should be imparted in the faculty development programmes as mandatory segments along with their relevant content and pedagogies. And I suggest they should be activity based." (Respondent No. 109)

ii. Alignment of sustainability efforts with the required indicators of global citizenship behavior

The respondents (68%, $f = 81$ of 120) pointed out that the central reason for the ineffectiveness of sustainability efforts is their dissociation with the global citizenship demands. They proclaimed that haphazard efforts for sustainability are wastage of resources and will bear no fruit. In their opinion the sustainability efforts need to be aligned with the required indicators of the global citizenship behavior. A senior professor with 28 years' experience demanded:

"A high level committee needs to be constituted to see the matter. It should identify the necessary indicators/values of global citizenship behavior and recommend relevant sustainability efforts for higher learning institutions. The committee should chalk out some task oriented logical and solid mechanism for the very purpose." (Respondent No. 58)

iii. Linking with promotion criterion of the teaching faculty

While suggesting various measures to bridge the gap between global citizenship behavior of teachers and the sustainability efforts of higher learning institutions, the senior faculty members (62%, $f = 75$ of 120) proposed that the behavior of teacher with reference to adopting and promoting global citizenship may be linked with the promotion of university teachers. Reinforcing their standpoint, they referred various learning theories like behaviorism which maintains that individuals learn and influenced by external factors rather than internal ones e.g. classical conditioning as was experienced in Pavlov's experiments that the behaviors are driven by the stimulus. They also denoted transformative learning theory in which individuals transform their behavior in the light of their previous experiences and more specifically, the social learning theory introduced by Albert Bandura. The theory which focuses on the concept of learning by observing others how they are rewarded on their good performance and punished on bad one.

For instance, a senior faculty member of 54 working as dean of a faculty of 6 departments and having a 14 years administrative experience, stated:

"I personally believe on the basis of my knowledge and experience that a man only changes his behavior when he finds some needful reward for his performance or he gets punishment for not doing the required job what so ever. Hence, the overall behavior of teachers and particularly with reference to values like global citizenship, should be observed and evaluated as part of their annual confidential reports." (Respondent No. 106)

Discussion

The world we live in has become a global village. Its inhabitants share a common future and are more interdependent than ever before. Therefore, they need to behave as global citizens. Global citizenship behavior involves a sense of collective responsibility and action. Educational institutions, especially higher education institutions, are seen as centers for producing global citizens, and teachers in these institutions are expected to act as change agents in this regard. The existing study was directed to explore the level of higher education teachers' GCB and Institutional Sustainability Practices (ISP) of higher education. It was reported that majority of the higher education teachers (65%) exposed that they maintain GCB at moderate ($M=3.60$). However, in concerns of indicator, together with, 63% of higher education teachers were either agreed or strongly agreed that they have sense of social responsibility at moderate level ($M =3.54$) which is displaying their concern for equity, justice, and community well-being. Revealed finding are align with study of Morais and Ogden (2011), who highlighted that "Social Responsibility" is worth important and declared as a foundational so far it often unevenly articulated characteristic of GC. Furthermore, 66% were agreeing or strongly agreeing that they have sense of global competence at medium level ($M =3.64$) which means significant majority claimed that they possess the relevant knowledge, required level of skills, and observable attitudes essential to interact well in varied cultural contexts. The findings echo a robust understanding of "global interdependence" and "openness to cross-cultural learning".

The comparatively high proportion of agreement level specifies that higher education teachers are progressively visible in international and global perspectives, probably due to their academic relationships, participation in conferences, and global communication platforms. This outcome of the study supports previous investigation (e.g., Ruiz-Mallén et al., 2022) which is showing that higher education teachers often show higher levels of "global awareness" than other educational divisions. With respect to "Global Civic Engagement", 65% higher education teachers were found to be agreeing or strongly agreeing that they have the ability of global civic engagement at moderate level ($M =3.63$). This infers that an extensive majority of respondents take part in initiatives associated to "community service", and "sustainability awareness campaigns", thus far, these engagements are not universal. Similar results have been informed by Wagener, Smith, and Frantz (2023), who explicated that while teachers acknowledge "Civic Engagement" as vibrant to GC, real-world involvement often relays on culture of institution as well as support of leadership. The moderate level ($M = 3.60$) of GCB, shows that although higher education teachers are conscious about global issues and have positive attitudes toward GC, however, their behaviours and engagement to the institution are not so far at an optimum stage. This may imitate a limited support from institutional leadership, in-sufficient opportunities for professional development related to GCE, or challenging academic errands that confine external engagement.

Conclusions

A moderate level of GCB among higher education teachers is reflecting positive attitudes and awareness but then restricted active engagement. The overall institutional sustainability practices in higher education were found to be significantly high, showing commitment towards research, sustainable operations, and student engagement. A noteworthy gap was found between higher education teachers' level of GCB and institutional sustainability practices, signifying that higher education progress is not yet aligned by consistent behavioural change among teachers. Qualitative facts shows that such gap consequence of lack of structured training, mechanisms for monitoring, and most importantly lack of policy linkages of GCB with sustainability goals. Teachers are recognizing the worth of GC but see it as a personal concern rather than an institutional urgency. To bridge this gap, it requires a strategic and

calculated, policy driven approach which can connect behaviour of individuals with the sustainability objectives of institution.

Recommendations and Implications

The policy makers could implement systematic professional development training programs or workshops aimed at incorporating “GCB”, “GC values”, “sustainability competencies”, and their practical applications in teaching-learning and research. The HEC may create higher education-level committees to align policies about sustainability and practices with defined indicators of GCB. HEC could integrate GCB and institutional sustainability notions throughout the curricula by introducing interdisciplinary and experiential approaches of learning. Higher education leadership should clearly recognize GCB as a significant part of institutional sustainability and allocate resources to it accordingly. The results of this study, indicates that higher education ought to prioritize initiatives aimed at enhancing and maintaining teachers’ GCB. Cross-cultural collaborations, professional development related programs/workshops, and sustainability-focused institutional policies may improve teachers’ engagement and elevated their social responsibility.

References

Abubakar, S., Abdullahi, & Kabiru, F. (2014). *Mixed methods research in global education: Towards a new paradigm for global citizenship education*. International Journal of Secondary Education, 2(3), 52–60.

Association for the Advancement of Sustainability in Higher Education (AASHE). (2020). *Sustainability Tracking, Assessment & Rating System (STARS) Technical Manual*. AASHE.

Bamber, P. (2019). *Becoming a global citizen: Proceedings from the International Research Conference on Global Citizenship Education*. Routledge.

Barth, M., Godemann, J., Rieckmann, M., & Stoltenberg, U. (2007). Developing key competencies for sustainable development in higher education. *International Journal of Sustainability in Higher Education*, 8(4), 416–430.

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597.

Buzdar, M. A., Noreem, B., Mumtaz, A. S., & Saadi, S. (2023). *Global citizenship skills among university students and its relationship with their identity orientation*. Pakistan Journal of Education.

Campbell Pickford, H., & Joy, G. (2016). Organisational citizenship behaviours: Definitions and dimensions. *Saïd Business School WP*, 31.

Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). Routledge.

Cortese, A. D. (2003). The critical role of higher education in creating a sustainable future. *Planning for Higher Education*, 31(3), 15–22.

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage Publications.

Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education* (8th ed.). McGraw-Hill.

Higher Education Commission (HEC). (2019). *List of recognized universities and degree-awarding institutions in Pakistan*. Higher Education Commission of Pakistan. <https://www.hec.gov.pk>

Horey, D., Fortune, T., Nicolacopoulos, D., Kashima, Y., & Mathisen, B. (2018). Global citizenship and higher education: A scoping review of the empirical evidence. *Journal of Studies in International Education*, 22(5), 472–492.

Leal Filho, W., Shiel, C., & Paço, A. (2016). Implementing and operationalising integrative approaches to sustainability in higher education: The role of project-oriented learning. *Journal of Cleaner Production*, 133, 126–135.

Lozano, R., Ceulemans, K., Alonso-Almeida, M., Huisingsh, D., Lozano, F. J., Waas, T., ... & Hugé, J. (2015). A review of commitment and implementation of sustainable development in higher education: Results from a worldwide survey. *Journal of Cleaner Production*, 108, 1–18.

Michelsen, G., & Adomßent, M. (2014). Sustainable development and higher education. In M. Barth, G. Michelsen, M. Rieckmann, & I. Thomas (Eds.), *Routledge handbook of higher education for sustainable development* (pp. 3–26). Routledge.

Morais, D. B., & Ogden, A. C. (2011). Initial development and validation of the global citizenship scale. *Journal of Studies in International Education*, 15(5), 445–466.

Nagy, S., & Veresne Somosi, M. (2022). Students' perceptions of sustainable universities in Hungary: An importance–performance analysis. *arXiv preprint arXiv:2301.01278*.

Reysen, S., & Katzarska-Miller, I. (2013). A model of global citizenship: Antecedents and outcomes. *International Journal of Psychology*, 48(5), 858–870.

Ruiz-Mallén, I., Llobera, R., & Ribera, A. (2022). Global citizenship education and its role in sustainability at the university level. *Education Sciences*, 12(8), 847.

Tilbury, D. (2011). Education for Sustainable Development: An Expert Review of Processes and Learning. *UNESCO Publishing*.

UNESCO. (2017). *Education for sustainable development goals: Learning objectives*. UNESCO Publishing.

Wagener, E., Smith, M., & Frantz, J. (2023). Testing a model of global citizenship in higher education institutions in the SADC region. *South African Journal of Higher Education*, 37(2), 89–107.