Received 27 July 2023
Revised 29 September 2023
21 February 2024
30 April 2024
19 May 2024
Accepted 3 June 2024

Academia's engagement with Sustainable Development Goals: status quo and barriers at Great Zimbabwe University

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Abstract

Purpose – This study aims to examine academic staff's engagement with sustainable development goals (SDGs) in higher education institutions.

Design/methodology/approach – The triangulation, convergence model of the mixed methods research design was adopted as the strategy for inquiry. A total of 56 questionnaires and 25 interviews were used to collect the data, and this was buttressed by document review and use of secondary data obtained from Scival.

Findings – The results show moderate levels of engagement of academic staff with the SDGs. However, SDGs familiarisation is not correlated with the rate of localisation. The lack of funding deflated political will by university management, demotivated academia and shrinking government support are the leading impediments to SDGs localisation.

Research limitations/implications – The results could be improved by using a larger sample size equally distributed across disciplines. Triangulation of academics' views with those of students and non-academic staff could have improved the understanding of other dynamics involved in the localisation of SDGs by university teaching staff.

Practical implications – The results point towards the need for a university-based framework that interweaves national, institutional, thematic, structural and personal aspects into the SDGs implementation matrix. The underlying determinants of successful localisation of SDGs by academia need to be addressed through a bottom-up approach.

Originality/value – To the best of the authors' knowledge, this paper is the first attempt in Zimbabwe to exclusively look at University teaching staff's engagement with SDGs.

Keywords SDGs, Academia, SDGs localisation, Stakeholders, SDG 4, Quality education

Paper type Research paper

1. Introduction

The concept of sustainable development has the capacity to influence the actions and programmes of institutions and societal groups dedicated to balancing the social, economic and environmental dimensions of development (Serafini *et al.*, 2022; Zwolińska *et al.*, 2022). The notion of sustainable development has evolved over time and gained increased

International Journal of Sustainability in Higher Education
Vol. 25 No. 9, 2024
pp. 234-254
Emerald Publishing Limited
1467-6370
DOI 10.1108/IJSHE-07-2023-0329

prominence in 2015 with the introduction of the 2030 agenda for sustainable development (AfSD), which incorporates the sustainable development goals (SDGs). The 2030 AfSD was adopted by 193 nations at the United Nations General Assembly, establishing an international framework to guide societies towards a sustainable trajectory (Leal Filho *et al.*, 2021; United Nations, 2018). The AfSD comprises 17 linked SDGs, 169 targets and approximately 232 indicators that outline an action plan for people, the planet and the promotion of peace and prosperity (United Nations, 2019). For the successful implementation, monitoring and evaluation of the SDGs, targets and indicators, various stakeholders are expected to be involved across multiple dimensions, including higher education institutions (HEIs). From the HEIs, the academia remains central in implementing the 2030 AfSD (Leal Filho *et al.*, 2023; Song *et al.*, 2022).

The localisation of SDGs in HEIs has the potential to incentivise sustainability in higher education and other economic sectors (Leal Filho *et al.*, 2023). Scholars argue that SDGs can revitalise initiatives across the core HEIs mandates including research and innovation, as well as teaching and learning on sustainable development (Chambers and Walker, 2016; Leal Filho *et al.*, 2019). This highlights the need for HEIs to intensify efforts and embed SDGs in academic content, either within courses or as standalone subjects (Fia *et al.*, 2022; Priyadarshini and Abhilash, 2020; García-González *et al.*, 2020; Zamora-Polo and Sánchez-Martín, 2019).

Venkiteswaran and Cohen (2018) note that in some HEIs, teaching staff lead the localisation of SDGs by implementing experimental learning activities to enhance students' understanding of SDGs. However, Leal Filho *et al.* (2021) argue these initiatives are rare in resource-limited universities, especially in developing countries. In the global south, academics often lack resources to facilitate experimental initiatives and community engagement programmes aimed at localising SDGs.

Additionally, current knowledge about academics' engagement with SDGs is limited, as most research focuses on their awareness and perceptions. Consequently, studies on university lecturers' capacity to address SDGs are crucial. Most existing studies emphasise students' perceptions and knowledge (Leal Filho *et al.*, 2023; Leiva-Brondo *et al.*, 2022; Serafini *et al.*, 2022; Yuan *et al.*, 2021).

Drawing from the arguments herein, examining academia's engagement with SDGs to develop a framework for improving SDG localisation is essential. To this end, this study uses the Great Zimbabwe University (GZU) as a case to explore how teaching staff have localised SDGs, analysing the underlying factors and connections in the process.

2. Literature review

2.1 Sustainable development goals localisation in higher education institutions: an overview

The SDGs aim to eradicate poverty, reduce inequalities, foster economic growth, enhance educational quality and improve environmental health globally (Cottafava *et al.*, 2022a; Sonetti *et al.*, 2021a; Takian and Akbari-Sari, 2016). Although "higher education" is mentioned only twice in the United Nations (UN's) Global Indicator Framework for SDGs, HEIs are crucial for implementing these goals (Amorós Molina *et al.*, 2023; Leal Filho *et al.*, 2019; Sonetti *et al.*, 2021a). Several studies (García-González *et al.*, 2020; Leal Filho *et al.*, 2023; Leiva-Brondo *et al.*, 2022) highlight HEIs' role in facilitating SDG implementation through education, outreach, awareness-raising, management, research and community engagement (Serafini *et al.*, 2022). HEIs are also responsible for providing skills and competencies that enable professionals to contribute to achieving SDGs (García-Feijoo *et al.*, 2020). The ability of future generations to manage resources sustainably depends on the

education and skills they gain from today's HEIs, aligning with SDG 4's emphasis on quality education.

Some scholars report significant progress in integrating SDGs into curricula at various institutions (Fekih Zguir *et al.*, 2021; Juan *et al.*, 2022). However, this progress is limited to HEIs with sufficient resources and access to relevant information. Therefore, there is a need to enhance SDG coverage in curricula and equip university lecturers with the necessary resources, knowledge and skills for implementing SDG-focused curricula, learning programmes and community engagement initiatives. Implementing SDGs requires teaching staff to impart skills such as strategic vision, problem-solving, design thinking, social responsibility, anticipatory capabilities and interdisciplinary collaboration (Alghamdi and El-Hassan, 2020; Priyadarshini and Abhilash, 2020; Risopoulos-Pichler *et al.*, 2020). Incorporating SDGs into higher education enhances future professionals' ability to address complex, interrelated challenges (Amorós Molina *et al.*, 2023; Seva-Larrosa *et al.*, 2023).

Despite the pivotal role of university teaching staff in advancing SDGs localisation through core mandates including innovation, research, teaching and community engagement, their contributions are underrepresented in literature. Few studies focus directly on their perceptions, attitudes and knowledge regarding SDG localisation (Fia *et al.*, 2022; Juan *et al.*, 2022). However, examples of lecturers addressing global challenges within sustainable development contexts exist, such as initiatives by the University of Pretoria in South Africa and Ahfad University for Women in Sudan, which are recognised as SDGs hubs (Chankseliani and McCowan, 2021). Although academia contributes significantly to SDGs implementation, monitoring and evaluation, these efforts are not well-documented. Further investigation is needed to understand the dynamics of localising SDGs.

2.2 Sustainable development goals localisation in higher education institutions: an African perspective

Interest in localising the global sustainable development agenda is growing within the African higher education communities (Aarts *et al.*, 2020). HEIs are crucial for promoting sustainable development across economic and non-economic facets in Africa. They train the next generation of scientists, scholars, researchers and leaders, engage in basic and applied research and lead innovations necessary for sustainable development (Gora, 2022; Sawahel, 2021; Shiel *et al.*, 2019).

The strategic approach for African HEIs to contribute to the SDGs is to produce skilled workers across disciplines. For example, SDG 2 (ending hunger) requires scientists and agronomists; SDG 3 (reducing mortality) requires health professionals; and SDG 4 (ensuring quality education) requires well-trained teachers (Aarts *et al.*, 2020). However, the extent to which academia has familiarised, localised or implemented SDGs is in question. Barriers hindering academia's ability to contribute to SDGs localisation also need to be identified and addressed.

Several barriers to sustainability initiatives in universities have been noted. In Kenya, the greatest barriers include lack of funding, comprehensive programmes, strategic planning and clarity of objectives (Ekene and Oluoch-Suleh, 2015). In South Africa, institutional cultures and a lack of technological drive also hinder SDGs implementation (Togo and Gandidzanwa, 2021). At the University of South Africa, while many activities align with SDGs, funding remains a challenge (Mawonde and Togo, 2019). Strategic challenges are also evident, as many African HEIs' mission statements do not include sustainability considerations. Poverty, technical and informational shortcomings exacerbate these issues (Togo and Gandidzanwa, 2021). In Zimbabwe, institutions face financial constraints due to national economic challenges, leading to failure in delivering on SDGs localisation (Gora, 2022).

3. Materials and methods

3.1 Description of study area

The study was conducted at the GZU (Figure 1), a state institution of higher education established under the GZU Act Chapter 22.24 No.11/2002.

GZU comprises seven schools that run a diversity of degree programmes. The institution is ranked 7th out of the 18 universities in the country. The ranking is based on the H-index (AD Scientific Index, 2023). The GZU has an established Centre of Excellence in Dryland Agriculture, where it works with various government and international partners to implement research agenda aligned with the SDGs (Great Zimbabwe University, 2023). This initiative is anticipated to contribute to enhancing climate action (SDG 13) and improve food security (SDG 2) among communities within the dryland region. There are other initiatives across the university's seven schools that focus on localising the SDGs.

3.2 Research design

The four key research questions addressed by this study are as follows: (1) What is the level of SDGs familiarisation of GZU academics? (2) To what extend have GZU academics been involved in the implementation/localisation of SDGs? (3) Is familiarisation correlated with localisation? (4) What are the barriers faced by academics in SDGs localisation and which barriers should be prioritised to at least achieve optimum implementation of SDGs? To provide answers to these research questions, the triangulation, convergence model of the mixed methods research approach was adopted as the scheme of investigation. To fully comprehend the research problem, the design (Figure 2) uses a variety of complementary data collection and analysis techniques on the same subject (Tashakkori and Creswell, 2007).

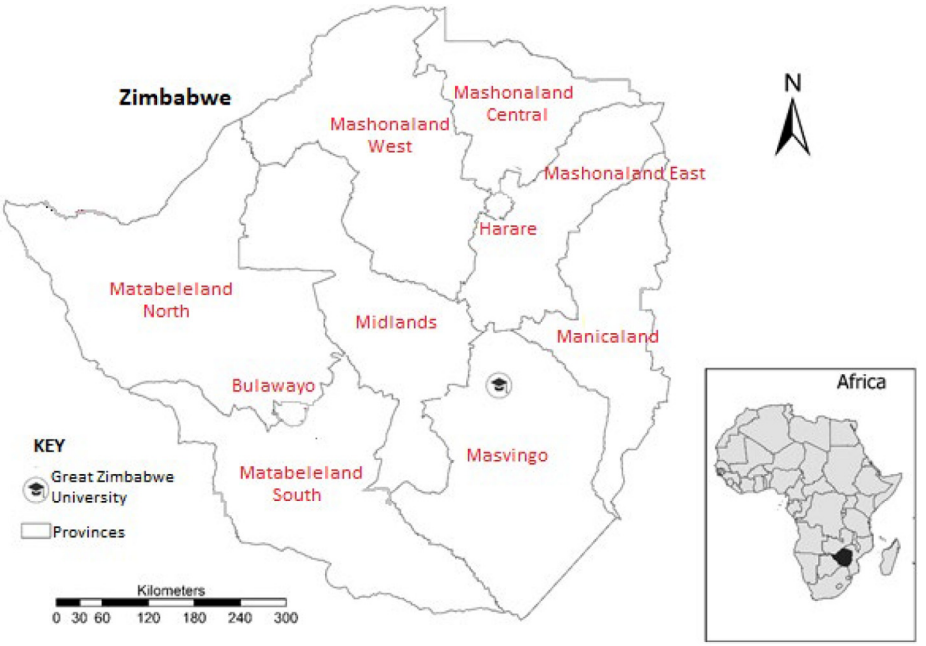

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Figure 1.
Map of study area

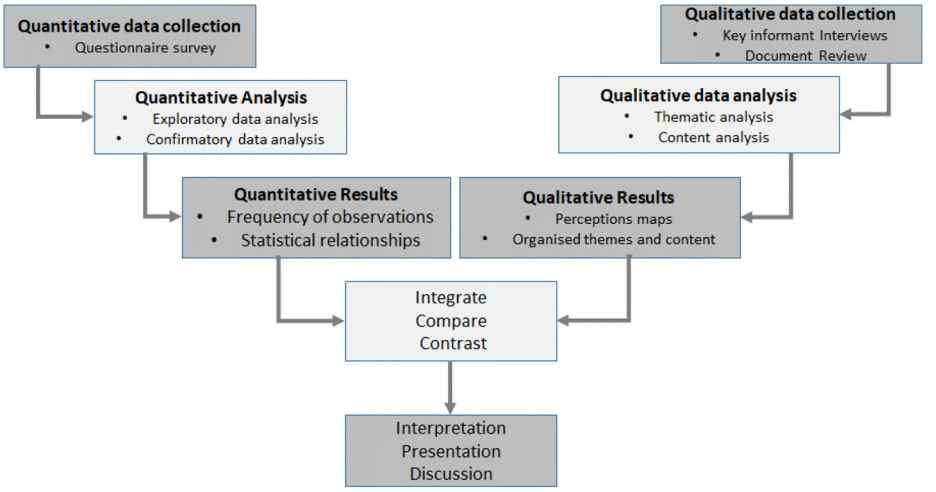

Figure 2.
Triangulation, convergence model of the mixed methods research design

Sources: Modified from (Chapungu and Nhamo, 2021); Figure created by Authors

The quantitative data collection process involved a questionnaire survey completed by 56 university staff members responsible for teaching subject content. The questionnaire was developed based on questions from authenticated and peer-reviewed surveys, as well as the researchers' expertise in the subject matter. The questionnaire comprised 21 questions divided into two sections: Section A focused on demographic information, while Section B explored insights into awareness and localisation of SDGs. All questions aimed to gather information on academics' experiences and involvement with the SDGs. Some questions used a five-point Likert scale, allowing respondents to express their degree of acceptance of specific notions, ranging from total rejection (strongly disagree) to total acceptance (strongly agree). To determine the internal consistency and validity of the constructs in the questionnaire, the Cronbach's alpha was calculated using the following equation:

$$\alpha = \left(\frac{K}{K-1}\right)\left(\frac{S_{y-\sum_{si}}^{2}}{S_{y}^{2}}\right)$$

where:

α = Cronbach's alpha;
K = number of items; and
S^2 = variance between items.

A preloaded survey was used on mobile devices to conduct the survey on the QuestionPro platform. Potential respondents were occasionally given an electronic link to the survey so they could complete it on their own mobile devices. An average of 15 min were needed to complete each survey.

Key informant interviews ($n = 25$) were conducted to gain deeper insights into academics' involvement with SDGs. The interviewees included university management staff, deans of schools and heads of departments. Purposive sampling was employed to select deans and chairpersons from schools due to their central role in research, teaching and community engagement activities. Referral sampling was used to identify other interviewees within

departments, with recommendations provided by deans based on individuals' roles in teaching, research and community engagement. Part-time staff members were excluded from interviews. Table 1 shows details regarding the schools, number of interviewees and the disciplines and modules taught by the selected interviewees.

The average time for each interview was 45 min. The questions posed during the interviews included the following:

Q1. How would you describe the level of self-driven participation of university lecturers in activities related to SDGs at your university?

Q2. How would you describe the lecturers' aptitude and attitude towards SDGs related content of the curricula?

Q3. Please describe the level of familiarity with SDGs content among lecturers at your university.

School/section/department	Survey respondents	No. of interviewees	Departments/disciplines	Modules taught
Management staff	0	3	Finance, pro-vice chancellor's office and registry	N/A
Gary Magadzire School of Agriculture and Engineering	8	4	Deanery Chairperson Livestock and fisheries crop science	N/A Crop physiology Fish nutrition Agrometeorology
Munhumutapa School of Commerce	8	3	Banking and finance Economics Management studies	Micro-finance Financial economics Risk management
Robert Mugabe School of Heritage and Education	10	3	Curriculum studies Teacher development Technical education	Geography Sociolinguistics Visual interpretation
Hebert Chitepo Law School	3	2	Deanery General	N/A Constitutional law
Simon Mazorodze School of Medical and Health Sciences	8	4	Deanery Public health Medicine Nursing	Modules still at developmental stage
School of Natural Sciences	9	3	Deanery Geography and environmental sciences Statistics and computer sciences	Environ science Health geography Operations research
Julius Nyerere School of Social Sciences	10	3	Deanery Human resource management Sociology and social anthropology	N/A Labour relations Industrial ecology
Total participants	56	25		

Source: Table created by authors

Table 1. Profile for survey respondents and interviewees selected to participate in the study

Data collected through questionnaire surveys and key informant interviews were augmented by secondary data sources, including management plans, science bulletins, annual reports and websites. Data on research publications on SDGs by academic staff at the GZU was obtained from Scival (www.scival.com/overview/sdg?uri=Institution/716596). Scival is an analytical tool for measuring publishing metrics gathered from the Scopus data set. Such data was pitched against respondents' answers to a question seeking the publications any academic had made on SDGs.

3.3 Sampling

The study used a stratified census sampling approach to identify participants, with the university's seven schools treated as strata. Participants were randomly selected, with a focus on those available during the research team's visit. This made every academic staff member who was available eligible to participate. Additionally, university lecturers' school social media platforms, such as WhatsApp groups and emails, were used to reach out to all academic staff members through a survey link shared on these platforms. Key informant interviewees, including deans of schools, research chairs and departmental chairs, were purposively sampled.

3.4 Data analysis

Regression analysis was used to investigate the relationship between lecturers' familiarisation with SDGs and their localisation and/or implementation. Initially, familiarisation scores were computed based on exposure to SDGs information. This exposure included reading the United Nations 2030 AfSD document, familiarity with the millennium development goals (MDGs), attendance at SDGs conferences, workshops, webinars and awareness of SDGs through other means. The equation was formally stated as:

$$Fs = \left(\left(\sum C + R1 + R2 + W + A\right) / \sum N\right) * 100$$

where:

Fs = familiarisation score;
C = conference attendance;
$R1$ = read the 2030 AfSD document;
$R2$ = read the MDGs;
W = implementation of SDGs by GZU; and
A = awareness.

The localisation score was computed based on the lecturers' activities at the university and in the community, as well as partnerships established with institutions within and outside the country. The following formula was used to compute the localisation score:

$$Ls = \left(\left(\sum t + R + C + A\right) / \sum N\right) * 100$$

where:

Ls = localisation score;
t = teaching of SDGs in current curriculum;
R = research and innovation on SDGs;
C = community engagement on SDGs; and
A = academic citizenship.

The study used the Pareto principle to identify the most significant impediments to localising SDGs. The Pareto principle suggests that 80% of the barriers can be attributed to 20% of the causes (Neill, 2018). Pareto analysis, as described by Leavengood and Reeb (2002), statistically identifies a small subset of input variables that have a significant impact on an outcome. The modern application of the Pareto principle involves ranking challenges within an organisation, starting with those that are key and have the potential to influence the status quo (Kenton, 2022). In this study, the Pareto principle was loosely applied to rank barriers and plot a unique combo chart, determining those requiring immediate attention and those not prioritised as the institution progresses towards SDG localisation.

Qualitative data analysis approaches included thematic and content analysis. Content analysis involved reading interview transcripts, annotation, data conceptualisation, segmentation and analysis. Thematic analysis encompassed familiarisation with interview data, coding, theme generation and review. Additionally, QuestionPro-based word cloud analysis was conducted on questions focusing on participants' comments and suggestions, aiming to obtain a graphical representation of prominent issues raised by participants regarding university lecturers' engagement with SDGs.

4. Presentation of results

4.1 Reliability and consistency of the constructs

The results show that the computed Cronbach's alpha for GZU lecturer's SDG engagement was 0.69. This did not deviate significantly from the desirable 0.7 alpha. Therefore, the constructs used in the questionnaire survey were regarded as consistent and reliable.

4.2 General demographics

A total of 56 teaching staff participated in the questionnaire survey. Table 2 shows the demographic variables for the survey respondents. The study's demographic profile reveals that the highest number of participants fell within the 35 to 44 age group, with a greater percentage being males. The 45 to 54 age group constituted the second highest number of participants. This profile reflects the university's recruitment structure, indicating a higher number of male lecturers compared to females. Historical factors, such as fewer females pursuing education beyond a master's degree, contribute to this imbalance. Lectureship typically requires candidates with a master's qualification or higher. Most respondents (64.29%) held lecturer positions, followed by 23.21% senior lecturers, 5.36% associate professors and only one participant was a full professor. This structure may be influenced by brain drain, with senior teaching staff leaving for better opportunities abroad.

Most of the respondents (92.86%) were permanent staff members, with the remaining percentage comprising part-time and temporary full-time academic staff. The highest percentage (39.29%) had between one and five years of experience at the institution, while the lowest percentage (3.57%) had over 21 years. The trend indicates a decrease in the number of academic staff members with increasing years at the institution.

4.3 Sustainable development goals familiarisation

Responding directly to the question on familiarisation, about 75% of the respondents highlighted that they were aware of the SDGs. Only a few (8.9%) indicated that they are not aware of the SDGs while another 16.07% showed neutrality. A greater percentage (78.5%) of the respondents also indicated familiarity with the MDGs, which were predecessors of the SDGs. About 19.6% were not familiar with MDGs with 8.9% indicating that they are not sure. Figure 3 shows the level of familiarity based on three aspects: having read the UN document on the 2030 AfSD, having read about the MDGs and being aware of the SDGs.

Demographic variable	No.	%
Gender		
Males	40	71.4
Females	16	28.6
Age		
18–24	1	1.79
25–34	3	5.36
35–44	24	42.86
45–54	19	33.93
55–64	9	16.07
Position in the university		
Lecturer	36	64.29
Senior lecturer	13	23.21
Associate professor	3	5.36
Full professor	1	1.79
Other	3	5.36
Status of employment		
Permanent	52	92.86
Part-time	1	1.79
Temporary full-time	2	3.57
Other	1	1.79
Number of years employed		
1–5	22	39.29
6–10	14	25.00
11–15	12	21.43
15–20	6	10.71
21+	2	3.57

Source: Table created by authors

Table 2.
Demographic variables for the study respondents

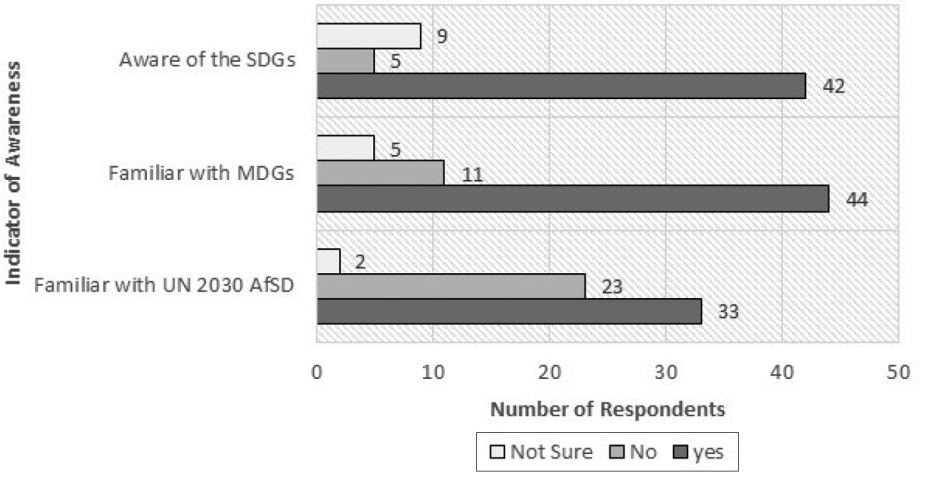

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Figure 3.
Familiarisation with SDGs among university lecturers at GZU

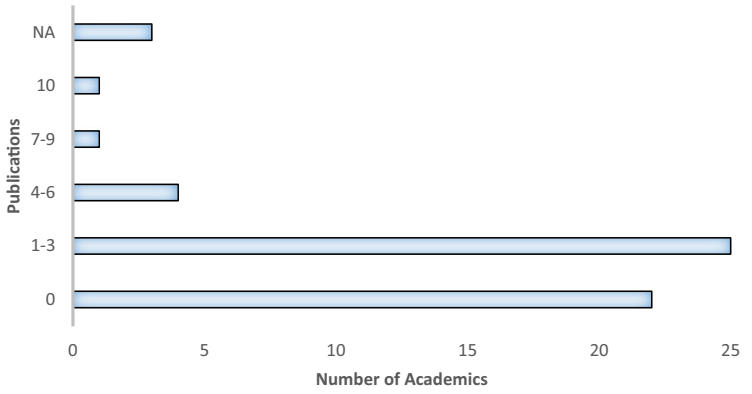
4.3.1 Research and publications. The rate of publication on SDGs reflects the extent of familiarisation as this involves reading about the SDGs and applying the knowledge to local circumstances within a particular study area or conceptual scope. There is a general propensity by scholars to focus on current topics that are relevant to practical realities in society in any field of study. Results show that 44.6% of the respondents had between one and three publications in peer-reviewed journals that explicitly mentioned SDGs. Figure 4 shows the SDGs research and publication profile for the study respondents.

As depicted in Figure 4, an estimated 39.29% of the respondents had not published any articles on SDGs, while 60.71% had published at least one article on the topic. One respondent mentioned having published over ten research articles explicitly mentioning SDGs, while another reported publishing between seven and nine articles on the subject. A small percentage (5.3%) stated that publishing on SDGs was not applicable to their current roles and responsibilities.

Analysis of Scival data on SDGs publications by the university revealed that by 2022, academic staff had collectively published 438 articles, book chapters and conference papers explicitly mentioning SDGs. All SDGs, except SDG 17, had been addressed by at least one member of the university community. Table 3 provides specific details on the number of publications by staff members, the field-weighted citation impact and the number of citations for each SDG.

Table 3 highlights that SDG 16 (Peace, Justice and Strong Institutions) has the highest number of research outputs by teaching staff, followed by SDGs 5 (Gender Equality), 10 (Reduced Inequality), 8 (Decent Work and Economic Growth) and 3 (Good Health and Well-being). However, in terms of field-weighted citation impact, SDG 3 (Good Health and Well-being) leads (with a score of 2.07), followed by SDG 13 (Climate Action) (1.99), SDG 9 (Industry, Innovation and Infrastructure) (1.86), SDG 12 (Responsible Consumption and Production) (1.41) and SDG 15 (Life on Land) (1.01). The remaining SDGs have a field-weighted citation impact of less than 1. Overall, there have been 438 publications explicitly mentioning SDGs, with an average citation impact of 0.938 and a total of 2,218 citations.

With over 60% of survey participants having published at least one article explicitly mentioning SDGs, it can be inferred that the level of familiarity with SDGs among academics is commendably high. This observation is supported by Scival data, indicating a substantial number of publications generating thousands of citations and a notable citation impact. This underscores the commitment of HEIs to contribute significantly to SDGs. Given the context in which academics in developing countries operate, the level of



Source: Figure created by authors

Figure 4.
Number of publications on SDGs by lecturers at GZU

Name of SDG	Scholarly output	Field-weighted citation impact	Citation count
SDG 1: No Poverty	30	0.51	91
SDG 2: Zero Hunger	34	0.46	76
SDG 3: Good Health and Well-being	42	2.07	110
SDG 4: Quality Education	23	0.6	79
SDG 5: Gender Equality	46	0.64	99
SDG 6: Clean Water and Sanitation	18	0.4	65
SDG 7: Affordable and Clean Energy	5	0.97	82
SDG 8: Decent Work and Economic Growth	42	0.69	209
SDG 9: Industry, Innovation and Infrastructure	15	1.86	288
SDG 10: Reduced Inequality	43	0.54	97
SDG 11: Sustainable Cities and Communities	28	0.7	83
SDG 12: Responsible Consumption and Production	24	1.41	364
SDG 13: Climate Action	22	1.99	341
SDG 14: Life Below Water	2	0.33	1
SDG 15: Life on Land	11	1.01	57
SDG 16: Peace, Justice and Strong Institutions	53	0.83	176
Total	438	0.938	2,218

Source: Table created by authors

Table 3. SDGs Publication metrics by GZU academic staff by 2022

familiarity demonstrated by GZU staff through publications, citations and impact rankings can be considered high.

The survey results positively converge with the notions of most of the interviewees, who indicated that SDGs are well-known by academic staff at the institution. It emerged that some lecturers in the social sciences, environmental sciences and Education disciplines have curricula sections that explicitly deal with SDGs, an indication of familiarity. One interviewee had the following to say:

> We know SDGs and I am sure most of the lecturers in one way or another have learnt about them. In fact, the National Development Strategy of Zimbabwe is our template for SDGs localisation [. . .].

The excerpt suggests that lecturers at GZU are expected to be knowledgeable about the SDGs in alignment with the national development strategy (NDS1). This strategy underscores the importance of adapting curricula to foster science-driven innovations, aiming to enhance the higher education system's capacity to generate impactful outcomes that contribute to societal transformation and the attainment of specific SDGs.

4.3.2 Promotion of sustainable development goals in academic activities. The findings indicate that a majority of the academics at GZU acknowledge their involvement in SDGs through academic endeavours. Specifically, 41.07% of the teaching staff agree that they have integrated SDGs into their teaching and learning activities, while an additional 23.21% strongly endorse this assertion. Figure 5 illustrates the perspectives of the teaching staff concerning their engagement in SDGs-related initiatives.

Figure 5 shows that the majority of respondents (51.79%) agree that they actively engage with SDGs through research, innovation and internationalisation, with an additional 30.36% strongly agreeing. However, a minority (8.93%) remained neutral, while some (5.3% and 3.57%) expressed strong disagreement and disagreement, respectively.

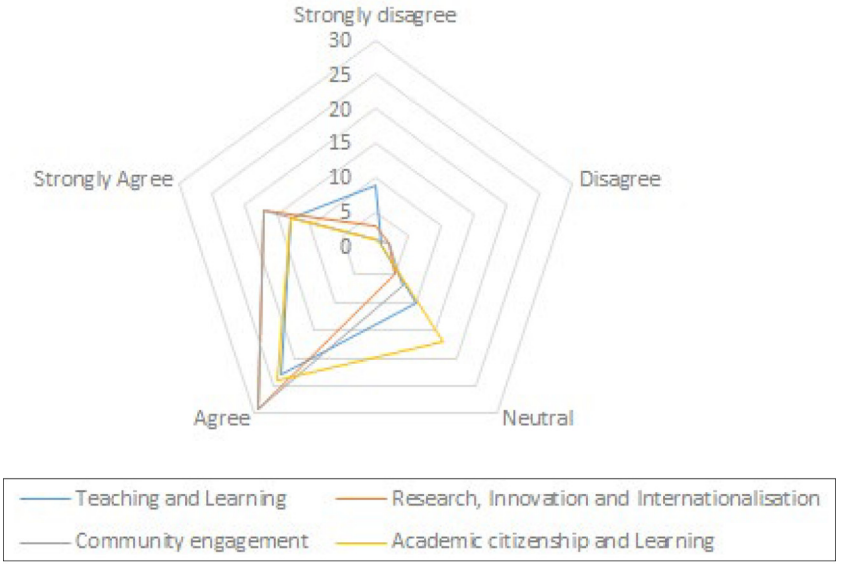


Figure 5.
Perceptions of lecturers regarding their involvement with SDGs activities

Source: Figure created by authors

Regarding community engagement, 51.79% of lecturers acknowledge their active involvement, with 30.36% strongly endorsing this sentiment. Nonetheless, 12.50% maintained a neutral stance, while 3.57% and 1.79% disagreed and strongly disagreed, respectively. Concerning academic citizenship, a substantial portion of respondents (42.86%) agreed that they have promoted SDGs through this avenue, with 23.21% strongly agreeing. However, a notable proportion (30.36%) remained neutral, while 1.79% disagreed and another 1.79% strongly disagreed.

Overall, university lecturers perceive themselves as playing a significant role in advancing SDGs through various activities encompassing teaching and learning, community engagement, research and innovation, as well as academic citizenship.

4.4 Sustainable development goals familiarisation vs localisation

The results show that there is no significant ($p = 0.14$; $\alpha = 0.05$) relationship between the localisation score and the familiarisation score (Figure 6). This lack of significance indicates that either the variables do not contribute meaningfully to the model or there may be missing covariates that could better explain variability. Furthermore, the weak relationship observed ($R^2 = 0.12$) between familiarisation and localisation implies that factors beyond knowledge of SDGs may influence their implementation. This suggests the presence of additional variables that play a role in shaping the adoption and adaptation of SDGs within a local context.

Interview data further confirm the notion that familiarisation does not lead to localisation. This is due to a plethora of factors and what emerged from most of the interviews is summarised in one interviewee's elaboration as follows:

> The question of familiarisation versus localisation of SDGs is tough because of the intricacy of the implementation matrix [. . .] some are familiar with them but they do not have the means, the environment is not conducive, no adequate library facilities and the management team can be so frustrating if you want to be ambitious [. . .].

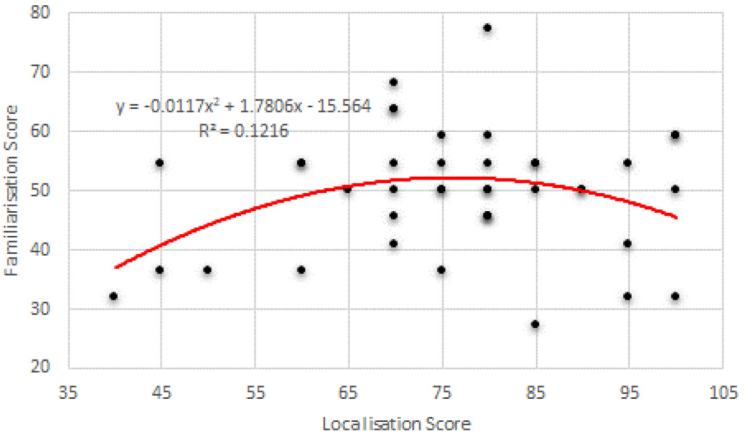


Figure 6.
Relationship between familiarisation and localisation of SDGs at GZU

Source: Figure created by authors

This interview extract reveals that there is no linear relationship between familiarisation and localisation. Among the explanatory variables could be included an environment which is not conducive. This means that increasing SDGs familiarisation without providing an enabling environment will not accelerate the implementation of SDGs by academics at GZU.

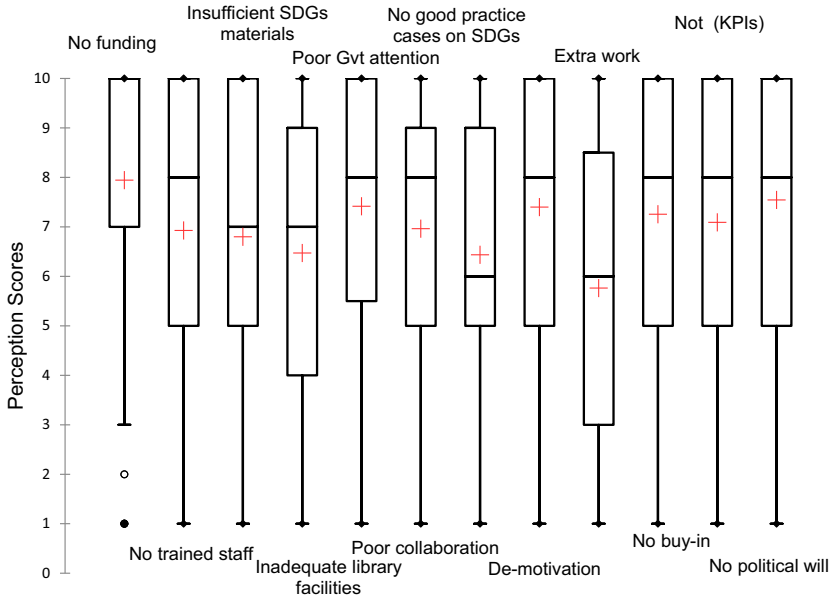
4.5 Barriers to sustainable development goals localisation

The results indicate that there are several obstacles to the localisation of the SDGs. These barriers include insufficient funding, limited support from top management, staff demotivation and inadequate collaboration between universities and other stakeholders such as non-governmental organisations (NGOs) and businesses. Figure 7 presents the scoring of these barriers by the respondents, where a higher mean signifies a more substantial obstacle.

As depicted in Figure 7, all barrier scores surpass a mean value above 5, indicating substantial hindrances to the adoption of SDGs. Notably, the mean scores for all 12 barriers range from 1 to 10, except for "lack of funding", which spans from 3 to 10. This underscores the prominence of insufficient funding as the most significant obstacle identified by respondents. The Kruskal–Wallis test reveals a noteworthy disparity in mean scores for the barriers ($p = 0.004$; $\alpha = 0.05$), suggesting varying perceived impacts on individual lecturers' SDGs-related performance. Hence, prioritising these barriers becomes imperative, given that some exert more obstructive influence than others.

A loosely applied Pareto analysis was conducted to identify the most crucial factors affecting SDGs localisation. This analysis aids in prioritising barriers for intervention to expedite SDGs localisation. Figure 8 depicts the Pareto chart illustrating the barriers that could be prioritised at GZU.

As illustrated in Figure 8, eight of the barriers identified account for 80% of the challenges encountered by teaching staff at GZU in implementing SDGs. According to the study's participants, the primary barriers include: lack of funding for SDGs-related activities, insufficient political will from university top management, inadequate collaboration and support from the national government, demotivated staff, limited buy-in from top management, absence of SDGs prioritisation in key performance areas, insufficient external support and collaboration from local businesses and NGOs and inadequate training



Source: Figure created by authors

Figure 7.
Mean barrier scores by respondents (Kruskal–Wallis test: $p = 0.004$; $\alpha = 0.05$)

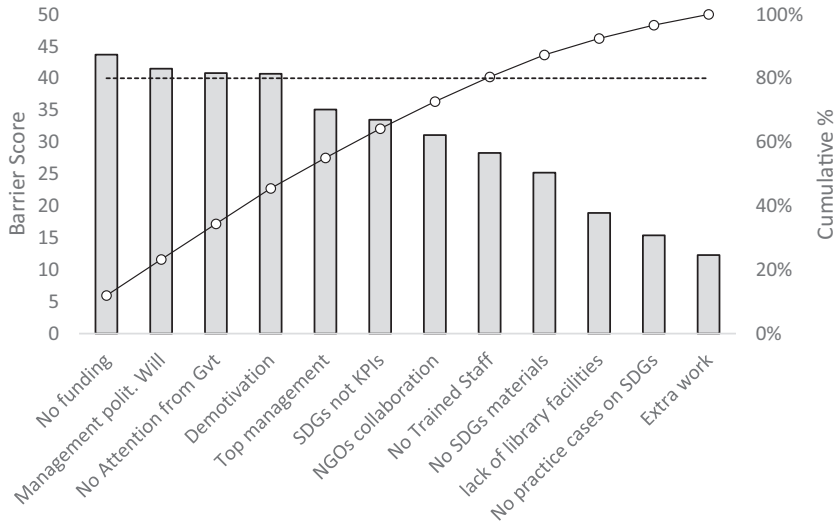


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Figure 8.
Pareto chart for barriers to SDGs localisation by University lecturers at GZU

of academics in SDGs-related skills. The remaining four barriers are significant but are considered lower priority, collectively contributing to only 20% of SDGs localisation challenges.

Some interviewees corroborated the quantitative observations, indicating that there are several challenges inhibiting the implementation of SDGs including lack of funding, lack of political will, lack of collaboration and demotivated staff members, among other barriers. The key informants believe that SDGs localisation by academics at GZU is mainly blocked by the lack of funding and challenges associated with the lack of management support. These barriers are also captured in one interviewee's elaboration who said:

> Our staff members are loaded with great ideas, especially related to innovations to transform local societies in all aspects of the SDGs [. . .]. However, they do not have funds to develop prototypes and perform other research related activities. This has been exacerbated by several other factors including wrong management team, low and demotivating remuneration. External partners to collaborate with have become scarce.

Interestingly, the order of the barriers seems to follow the ranking observed from the survey data. The lack of funding was mentioned first in most of the interviews and poor local management emerged prominently, indicating lack of top management buy-in.

4.6 Institutional engagement with sustainable development goals

Figure 9 presents the results pertaining to the teaching staff's perceptions on the level of GZU's engagement with each SDG. As indicated in Figure 9, SDGs have elicited varying degrees of engagement within the institution. Notably, SDGs 4 (Quality education), 9 (Industry, innovation and infrastructure), 17 (Partnerships) and 5 (Gender equality) exhibit the highest levels of involvement, suggesting they are the most prioritised SDGs. Consequently, a considerable number of academics are actively participating in the implementation of these SDGs through research, community service and teaching. However, there remains uncertainty among some academics regarding the institution's level of

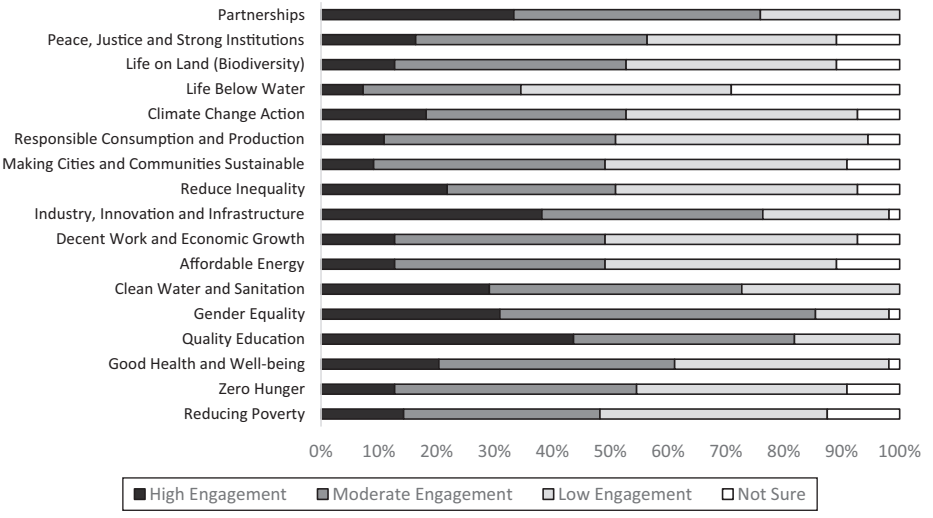

Figure 9.
Perceptions regarding the level of engagement with SDGs at GZU

Source: Figure created by authors

engagement with specific SDGs, indicating a relatively low awareness of the alignment of institutional activities with SDGs. Additionally, for SDGs such as 14 (Life below water), 1 (Poverty reduction), 7 (Access to affordable and clean energy), 8 (Decent work and economic growth) and 11 (Sustainable cities and communities), more than 50% of respondents reported low levels of engagement.

Interview data reflects low levels of engagement with SDGs at the institution. There is a general consensus among the respondents that the implementation of SDGs is, in most cases, implied rather than explicit. One interviewee pointed out that:

> Anything you do has implications on one or more SDGs [. . .] so I can't claim that the institution is engaging in the localisation of SDGs with a deliberate focus to achieve them. I can safely say the level of explicit SDGs engagement is extremely low [. . .] but from our ordinary activities you can always connect everything with SDGs given their 'all-encompassing' nature.

The above excerpt provides more evidence of low engagement with SDGs at institutional level. This view was shared by the majority of the interviewees who indicated that there is no deliberate effort to localise SDGs. However, given the broad scope of SDGs, some activities were likely to align with the SDGs agenda.

5. Discussion

The demographic profile of GZU portrays a predominantly young academic population, with most falling within the age range of 34 to 44 years. This age group is recognised for its economic, technological and academic prowess, possessing the adaptability to navigate technological advancements and evolving policy landscapes. Additionally, they are highly pragmatic, contributing to innovation and development efforts (Rasa and Laherto, 2022). This demographic context lends itself well to increased familiarity with SDGs within the institution, as these young academics explore contemporary issues to enhance their competitiveness in an increasingly globalised world. This demographic trend aligns with the substantial number (51.79%) of academics engaging in SDGs-related activities through research, and innovation. Given this demographic backdrop, the heightened involvement with SDGs is unsurprising, as age, coupled with other driving factors, reshapes HEIs. El-Jardali *et al.* (2018) observed HEIs' evolution from research and teaching entities into innovation-promoting knowledge centres, while Purcell *et al.* (2019) highlight HEIs' transition to champions of new and innovative sustainable development practices, surpassing their traditional role of student nurturing.

The findings demonstrate that university lecturers at GZU perceive themselves as actively engaging in the localisation of SDGs through various avenues such as teaching and learning, university service, community service, research and innovation. Their overall level of participation is considered moderate, with over 50% of teaching staff indicating familiarity with SDGs. Additionally, most of the lecturers have acquainted themselves with relevant documents pertaining to SDGs, with approximately 60.71% having published scientific papers explicitly mentioning SDGs. Data from the Scival database corroborate these findings, with a total of 438 publications on SDGs by the end of 2022. Similar studies by Cottafava *et al.* (2022) at the University of Turin noted an increase in SDGs-related publications between 2015 and 2018, while Funa *et al.* (2022) found a high level of SDGs knowledge among teachers in the Bicol region, Philippines. These observations support the assertions of several scholars, including Leal Filho *et al.* (2021), Priyadarshini and Abhilash (2020) and Sonetti *et al.* (2021), indicating a growing awareness and familiarity with SDGs in HEIs. Moreover, a study by Chapungu and Nhamo (2024) revealed that a significant

percentage of university students in Zimbabwe perceive their teachers as knowledgeable and familiar with SDGs.

Zimbabwe's NDS1 underscores the importance of aligning with the global aspirations of the SDGs. Higher and tertiary education institutions are tasked with revising curricula to enhance the relevance of the education system to global development trajectories, with a particular emphasis on driving science, innovation and entrepreneurship skills. Government support has been instrumental in increasing institutional capacity through the construction, equipping and re-tooling of laboratories and educational facilities. Academic staff participation in government-supported initiatives has facilitated their familiarisation with and implementation of SDGs-related activities. For example, GZU has witnessed the construction of the School of Medical and Health Sciences and related facilities to improve health outcomes in Masvingo province. Academic staff have been actively engaged in developing innovative curricula aimed at achieving health and related goals, as well as mobilising stakeholders and engaging with the community.

However, despite evidence of action by academic staff in implementing SDGs, this study notes that familiarity with SDGs does not necessarily translate to localisation. The relationship between familiarity and implementation was found to be weak ($R^2 = 0.1216$). Familiarisation exceeds actual implementation, suggesting that besides awareness and familiarity, other conditions must be met to facilitate active participation of individual academics in localising SDGs. Several barriers influencing SDGs implementation have been identified, with lack of funding being the primary one. This observation aligns with findings by Biglari *et al.* (2022), Sonetti *et al.* (2021) and Takian and Akbari-Sari (2016) that lack of resources is a key barrier to SDGs implementation, especially in HEIs. The current government drive to construct innovation hubs across Zimbabwean HEIs risks being futile if academics lack adequate financial resources to develop prototypes and create innovations that can address specific SDGs targets.

Availing financial resources for projects that transform the lives of nearby communities has the potential for positive ripple effects. Purcell *et al.* (2019) note that local communities can be inspired to achieve SDGs through sustainability practices demonstrated by HEIs, turning these institutions into awareness centres. However, limited resources hinder academics from realising their innovative potential and illuminating universities as centres of sustainability practices demonstration. Ekene and Oluoch-Suleh (2015) in Kenya and Serafini *et al.* (2022) have observed the futility of pushing for SDGs localisation without adequate financial resources. Mawonde and Togo (2019) concluded that lack of financial resources limits student participation in SDGs-related activities, which, in turn, affects the ability of teaching staff to implement innovative ideas.

6. Study implications

This study holds significant implications across policy, institutional, academic, practical and research domains. Policymakers are urged to allocate sufficient funding and resources to support SDGs localisation efforts within HEIs. Furthermore, policymakers should provide clear mandates to university management, prioritising and facilitating SDG integration. It is crucial to translate familiarity with SDGs into tangible sustainability initiatives. Exposure to practical cases could inspire academics to take action, potentially through exchange visits with institutions already implementing SDGs effectively. University management should spearhead synergies and collaborative projects with other universities and the private sector to alleviate financial burdens related to SDG activities.

Academic staff must be equipped with necessary knowledge, skills and motivation to meaningfully engage with SDGs. Professional development programmes, workshops and

incentives can enhance staff familiarity and commitment to SDGs initiatives. Addressing key barriers such as funding constraints, institutional inertia and faculty demotivation is crucial for successful SDG localisation.

Overall, collaborative efforts among policymakers, university administrators, academic staff and stakeholders are essential to advance the sustainable development agenda within HEIs. By addressing identified challenges and leveraging opportunities for innovation and collaboration, academics can play a pivotal role in advancing SDGs at local, national and global levels.

7. Conclusions

This study provides valuable insights into the complexities of academic staff engagement with SDGs within HEIs. Using a combination of surveys, interviews, document review and secondary data analysis, the research uncovers nuanced dynamics shaping this landscape. Findings reveal high familiarity and a moderate level of engagement among academic staff with SDGs, contrasted by sub-optimal localisation efforts. SDGs localisation is not commensurate with the level of familiarity among staff, indicating a multifaceted challenge.

The study identifies several critical barriers impeding effective SDG localisation, including limited funding, wavering institutional support, faculty demotivation and diminishing government backing. These obstacles highlight the need for a comprehensive framework integrating national, institutional, thematic, structural and personal dimensions for SDG implementation within universities.

Despite these challenges, academics have made significant strides in familiarising themselves with and implementing SDGs, albeit to a limited extent. The prevailing macro-economic conditions have exacerbated resource scarcity, threatening SDG localisation. It is imperative that new initiatives, including revamping HEI operational frameworks and capacitating research and innovation vehicles, are provided to motivate academics to accelerate SDGs implementation. A key takeaway from this study is that policymakers and decision makers should ensure that familiarisation with SDGs is supported by resources and motivation to translate knowledge into tangible products and services, addressing the SDGs vision of balancing people, the planet and prosperity.

The findings call for concerted efforts from policymakers, university administrators and academic staff to create a conducive environment for SDGs integration and implementation within HEIs. By addressing identified challenges and adopting a collaborative, holistic approach, universities can position themselves as catalysts for sustainable development, driving positive change at local, national and global scales.

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