EXPLORING STAKEHOLDERS' PERCEPTIONS OF THE GREEN CAMPUS INITIATIVE IN SOUTH AFRICAN HIGHER EDUCATION INSTITUTIONS

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ABSTRACT

Although mixed performances have been documented in attempts by South African higher education institutions (HEIs) to integrate the ethos of sustainable development (SD) into their core activities, neglect of such integration in the management of built assets and spaces on their campuses has been observed. This prompted the introduction of the Green Campus Initiative (GCI) in South Africa in 2012, among other things. However, implementation performance of the GCI seems to be under-reported, hence the need for this study. The study explored the level of awareness, as well as the perceptions of stakeholders, of the success or otherwise of the GCI in their respective institutions. Adopting a case study research design, this study relied on semi-structured interviews. Interviewees were recruited through purposive snowballing at a selected HEI, which served as a case study. Data that accrued from these sources was analysed using the thematic analysis technique. The preliminary findings revealed a considerable level of awareness among the interviewed stakeholders. The interviewees also agreed regarding the potential of the concept to make a significant contribution to resolving the environmental challenges bedevilling the South African context. Impediments hindering successful implementation of the initiative were also identified. Findings from this study will contribute to a wider research project seeking to optimise GCI implementation performance in South African HEIs.

Keywords: campus, Green Campus Initiative, higher education institutions, sustainable development, thematic analysis

1. INTRODUCTION

Sustainability and sustainable development (SD) remain pivotal concepts, which need to be addressed. Abubakar et al. (2016) have stated that over the past two decades, South African higher education institutions (HEIs) and other HEIs across the globe have joined their counterparts in promoting the concept of sustainability initiatives, also known as "the Green Campus Initiative (GCI)".

It must be taken into consideration that HEIs are known to be a microcosm of societies, or "small cities" (Alshuwaikhat and Abubakar, 2008). This means that HEIs are not only responsible for offering qualifications and conducting research, they are the key stakeholders in promoting and sustaining transformation within societies (Soni et al., 2015). Thus, it behoves HEIs to serve as champions for the sustainable development aspirations of societies. Accordingly, they are expected to provide exemplary leadership in this endeavour, through adoption and implementation of various facets of sustainable development in their core and non-core activities. The GCI happens to be one of the initiatives launched to achieve this objective.

The GCI is a broad concept, which consists of education, research, administration, and campus operations (Aleixo et al., 2018). A green campus consists of features such as energy management, water management, landscape management, biodiversity management, waste management, building management, purchasing, and food services. The focus of the study is limited to implementation of the GCI during the development and management of built assets in South African HEIs.

Although there have been many studies conducted on the state of implementation of the GCI globally, no studies are known to the authors concerning the state of GCI implementation within South African HEIs since the concept was launched in 2012. This lack of studies on the phenomenon is cause for concern among scholars, administrators, and policymakers working in the HEI space in South Africa. This study emanates from this observation and seeks to explore the level of awareness, as well as stakeholders' perceptions, of the GCI in South African HEIs.

This article is structured according to the following sections: a review of the literature, a justification of the research methodology, presentation and discussion of the findings, and a conclusion.

2. LITERATURE REVIEW

2.1 Sustainability and sustainable development in higher education institutions

According to Aleixo et al. (2018), sustainability is now a well-known concept. However, the terms "sustainability" and "sustainable development (SD)" remain ambiguous, as they will have different meanings for different people (Owens and Legere, 2015). Despite the existence of diverse views concerning what sustainability means, the definition provided by the World Commission on Environment and Development (WCED) appears to be widely accepted. According to the WCED (1987:46), sustainability is "the ability to meet the needs of the present while living within the carrying capacity of supporting ecosystems and without compromising the ability of the future generations to meet their own needs".

In a recent study conducted by Aleixo et al. (2018), most respondents (35%) associated sustainability with the "preservation and conservation of resources for future generations", while 30% of the respondents associated the concept with the three pillars of sustainability, namely the social, environmental and economic pillars. Other respondents associated the concept of sustainability with either one or two dimensions of sustainability. This shows that there is no generally accepted meaning for the concept.

Research has shown that HEIs are key stakeholders in driving society's quest for sustainable development (Baker-Shelley et al., 2017). This can be achieved through proper education, research, and involvement of all stakeholders (Dumitriu, 2017).

Educating HEI stakeholders about SD is important, as it will assist in developing their skills and broadening their knowledge regarding SD (Sanusi and Khelghat-Doost, 2008). This has led to the evolution of the sustainable university concept.

A sustainable university, according to Velazquez et al. (2006:812), is defined as "a higher educational institution, as a whole or as a part, that addresses, involves and promotes, on a regional or a global level, the minimization of negative environmental, economic, societal, and health effects generated in the use of their resources in order to fulfil its functions of teaching, research, outreach and partnership, and stewardship in ways to help society make the transition to sustainable lifestyles". A sustainable campus, or a green campus, must be able to reflect these features across four main components, as shown in Figure 1.
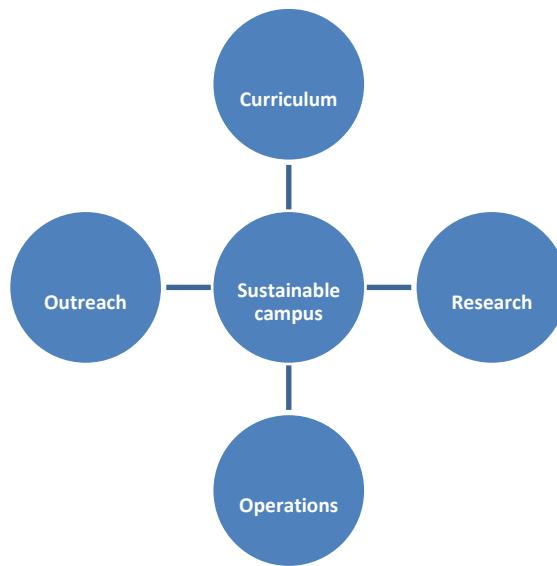

Figure 1: The main components of a sustainable campus (Adapted from Arroyo, 2017)

2.2   The Green Campus Initiative

Humblet et al. (2010:4) define a green campus as "a higher education community that is improving energy efficiency, conserving resources and enhancing environmental quality by educating for sustainability and creating healthy living and learning environments". The definition of a sustainable university (Velazquez et al., 2006) and the definition of a green campus (Humblet et al., 2010) are similar, as they both have a connection to what sustainability connotes. It should be noted that the main aims of the GCI in HEIs is to reduce the negative impacts that the biophysical environment is encountering due to the high levels of energy and water consumption and the utilisation of dangerous materials, through the design and construction of energy-efficient buildings (Alshuwaikhat and Abubakar, 2008).

According to Filho (2011), the aims of the GCI can only be achieved once the perceptions of stakeholders are understood. Katiliūtė et al. (2017) stated that the GCI cannot be achieved without the participation of stakeholders. Arroyo (2017) observed that HEIs consist of several stakeholders, as listed in Table 1. Each of the stakeholders listed in Table 1 has a fundamental role to play in the achievement of a green campus.

Table 1: Green campus stakeholders

External stakeholders	Internal stakeholders
Community/donors	Sustainability officer
NGOs	Faculty
University bodies	Staff
Companies	Research centres
Other universities	Administration
HE associations	Students
Alumni	
Government	

Source: Arroyo (2017)

2.3   Implementation of the GCI in South African HEIs

The GCI was launched in South Africa in 2012 by the Minister of Higher Education and Training, Mr Blade Nzimande. The purpose behind the launch was to make HEIs aware of the negative environmental impacts that are caused by their daily operations. In addition, the initiative sought to provide students with the necessary skills and knowledge to address and overcome sustainability issues, not only on their campuses, but also in their communities. However, six years after the launch of the initiative in South Africa, achievement of campus sustainability remains a critical subject that seems to be overlooked.

Many HEIs are struggling to fully implement the GCI, due to impediments that they are experiencing (Rwelamila and Purushottam, 2015). According to research that has been conducted, a common impediment that is experienced is the lack of financial resources (Arroyo, 2017). Katiliūtė et al. (2017) report that having a limited budget may result in HEIs not being able to fully commit to GCI projects, as some of these projects require a lot of money for them to be successful. Lack of awareness and knowledge regarding the GCI is also one of the impediments that have led to unwillingness among HEI stakeholders to support the sustainable transformation of their institutions (Katiliūtė et al., 2017).

Besides these, Velazquez et al. (2005) identified 18 impediments to GCI implementation, while Sharp (2002) identified mechanisms that can lead to successful achievement of the GCI (see Table 2).

Table 2: Impediments to GCI implementation, and mechanisms for successful GCI implementation

Impediments to GCI implementation	Mechanisms for successful GCI implementation
Lack of awareness, interest and involvement	Securing support from the management of the HEI
Not having a functional organisational structure	Having effective coordination
Lack of funding	Maximising face-to-face communication

Lack of support from the HEI administrators	Building formal and informal support
Lack of time	Seeking partnership from students and external stakeholders (through also involving the community)
Lack of data access	
Lack of training	Launching initiatives that attract most of the attention and support from stakeholders
Lack of opportune communication and information	
Resistance to change	Removing risk and generating organisational support for the running of projects
A profit mentality	
Lack of rigorous regulations	Having continuity of the launched initiatives
Lack of interdisciplinary research	Having the right management framework
Lack of performance indicators	
Lack of policies to promote sustainability on campus	Willingness to support low-risk innovation and to mentor staff
Lack of standard definitions of concepts	Continuously improving the learning curriculum regarding the GCI
Technical problems	Sharing its learning experiences
Designated workplace	
The "machismo"	

Sources: Velazquez et al. (2005), Sharp (2002)

The absence of any study that has comprehensively sought to identify these factors within South African HEIs, through eliciting stakeholders' perceptions, has led to this study.

3.   RESEARCH METHODOLOGY

3.1   Research method and design

This research study adopted a case study research design. The adopted research design was chosen as it allows the phenomenon to be viewed in more detail, namely exploring the perceptions of stakeholders in South African HEIs (Denscombe, 2007). The research study utilised multiple data-collection methods for the selected case study. Interviews were deployed to elicit data.

3.2   Case study selection

HEIs in South Africa were selected as probable case studies within which the viewpoints of relevant stakeholders would be elicited. Selection of the HEIs was based on their publicly available position regarding adoption of the GCI as part of their developmental programmes, as well as their intention to achieve the status of a sustainable university.

3.3   Sampling technique

A non-probability sampling technique was used, namely the purposive snowballing technique. This technique was chosen to give the researcher the opportunity to apply personal discretion in the selection of interviewees, based on their ability to provide

relevant answers to the interview questions posed (Saunders et al., 2009). The snowballing sampling technique made it possible for the interviewer to be referred to other stakeholders who could be able to answer questions regarding the phenomenon of the GCI. As such, the interviewed participants were selected based on their involvement in the GCI in the HEIs during the development and management of built assets and those who utilise the built assets.

Although efforts are still ongoing to conduct interviews with interviewees from the cases selected, this study reports on the interviews carried out within one particular case study. It was expected that the interviews would be conducted across four HEIs in South Africa. Unfortunately, due to certain constraints, only five internal stakeholders and one external stakeholder were interviewed in one particular HEI (see Table 3). The interviews were contacted telephonically, and the six interviewees that were interviewed are the ones that confirmed their availability. Data collection is still ongoing.

The interviewees are shown in Table 3.

Table 3: List of interviewees

No.	Interviewee code	External stakeholder	Internal stakeholder
1	FM1		Facilities management
2	FM2		Facilities management
3	F1		Faculty
4	F2		Faculty
5	S		Student
6	CS	Consultant	

Source: Authors (2018)

3.4 Data-collection technique

Data was collected through semi-structured interviews. The interviewees were assured that the interviews would remain confidential, and that their identities would be kept anonymous. Each interview lasted an average of 25 minutes. Notes were taken during the interviews, as the participants did not want to be recorded, because they wanted to protect the identity of their HEI. Three of the interviews were conducted in person, and the remaining three were conducted telephonically.

The interview questions were categorised in such a way that it would make it possible to determine and understand the following:

• the participants' level of knowledge, awareness and acceptance of the GCI concept;

• the degree of participants' participation in the initiative;

• the participants' perceptions of the significance of the GCI; and

• identification of impediments to GCI implementation.

After the interviews were conducted, the author relied on the notes taken during the interview sessions for data analysis.

3.5 Data-analysis technique

The collected data was analysed using the thematic analysis technique. Pre-set themes were adapted from the subcategories, namely

• the participants' level of knowledge, awareness and acceptance of the GCI concept;

• the degree of participants' participation in the initiative;

• the participants' perceptions of the significance of the GCI; and

• identification of impediments to GCI implementation.

The interviewer made sense of the pattern of narratives observed in the transcripts. Fragments of the narratives which are aligned with the pre-set themes were identified. The collection and analysis of data is still ongoing. As a result, only the preliminary findings will be discussed in the following section.

4. PRELIMINARY FINDINGS

The preliminary findings are presented below.

4.1 Level of knowledge, awareness and acceptance of the GCI concept

The interviewees were asked what they understand by the term "sustainability" and the concept of the GCI. Based on the responses received, they associated the term and the concept with the reduction of negative environmental effects resulting from campus operations.

F2 related the GCI concept to the three pillars of sustainability. F2 said that "GCI can be related to the three pillars of sustainability, which are social (which is the people who are involved the GCI, for example, student, faculty, administration and facilities management), environment (which is how the campus is being treated, for example, are people littering on campus, what kind of buildings are being constructed), and economic (how the GCI is being promoted relating to finances)".

Although, CS was not very familiar with the concept of the GCI, she stated that "[i]t has to do with creating an environment that is eco-friendly on campuses, developing campuses to become less inclined to harm the natural environment".

Once the interviewer gave a clear explanation of the concept of the GCI, the interviewees became aware of how broad the concept is. They were also able to align it with some of the "environmental" projects that are ongoing at their HEI. This made it clear to the interviewer that the absence of a standard definition of the concept (Velasquez et al., 2005) might be one of the reasons for the failure of the initiative to be introduced and implemented in South African HEIs.

4.2 Participation in the initiative, and perceptions of its significance

When asked about the effectiveness of the initiative and whether the participants had participated in any of the activities, the responses received were that the GCI in HEIs in South Africa might not be as effective as the GCI in HEIs in other countries (such as the United States of America), due to certain impediments that they are facing. Additionally, the interviewees alluded to the salient nature of the initiative.

F2 noted that it is important to have the GCI implemented, especially with the climate change and drought that South Africa is facing, and the important role was related that the HEIs play in educating about and achieving green, or sustainable, environments.

According to CS, "[s]ustainable buildings are important for HEIs. Natural resources can be depleted if people do not start such initiatives and create some awareness around the need to conserve resources. I think this initiative is also important when we consider the fact that encouraging a healthier environment will make for better space for the students that occupy it". S agreed that implementation of the initiative would not only be beneficial to the environment, but would make the campus environment a conducive one to study in.

4.3   Identification of impediments to GCI implementation

According to Velazquez et al. (2005), there are countless impediments that are affecting successful implementation of the GCI globally. According to the interviewees, the main impediments that they noted were lack of awareness and a lack of financial resources. Lack of financial resources was identified as a barrier, since GCI projects cost a lot of money, and when these projects do not have enough support and/or acceptable project proposals, they easily forfeit funding from sponsors. All the interviewees noted that the lack of awareness of the initiative resulted in the insignificant level of support received from the management of the HEIs, as well as poor student involvement in the initiative.

According to FM1, the GCI is not as effective as it should be. FM1 stated that "[r]easons for this are because greening a campus costs a lot of money, and, for example, if we are unable to get funding, it is impossible to carry on with the greening plans that we have to the buildings".

Among the 18 impediments that were identified by Velazquez et al. (2005), lack of awareness, interest, involvement, support from the HEIs' administrators, and funding are the impediments that lead to unsuccessful implementation of the GCI. This shows some consistency between the findings of both studies, despite the dissimilarities in the geographical contexts of the HEIs.

4.4   Suggestions for improved GCI implementation performance

The interviewees concluded that for HEIs in South Africa to achieve an acceptable level of greening, or sustainability, in their campuses, it was important to have more visible and audible campaigns, i.e. effective communication. Also, they stressed the need for faculty and staff to attend workshops, to make it possible for them to transfer the knowledge and skills obtained to the staff and students, as well as to the host community.

FM1 said that "[i]t will also be nice if we could be taken to workshops, in order for us to have a wider understanding of what the green campus is about. I believe that this will assist us in coming up with other better ideas in greening campus buildings".

Sharp (2002) concluded that one of the key mechanisms to achieving successful GCI implementation is to have continuity in improving the learning curriculum regarding the initiative. The interviewees added that raising awareness of the initiative, through conducting greening programmes and having small activities, would be of benefit for future greening activities.

5.   CONCLUSION

This exploratory study set out to explore the level of awareness, as well as the perceptions of stakeholders, of the GCI in South African HEIs. It is one of the first studies to be conducted that has sought to gain an understanding of the perceptions of various stakeholders within the community of South African HEIs.

Adopting a qualitative multi-method case study, this study commenced by conducting interviews, to gain insight from the stakeholders. However, the study has two limitations: firstly, the data cannot be generalised to the pre-selected South African HEIs, and, secondly, documents were not reviewed, as no formal permission was given by the HEIs. Data emanating from the qualitative sources was thematically analysed based on the pre-set categories.

The preliminary findings highlight the participants' level of knowledge, awareness and acceptance of the GCI concept, the degree of participants' participation in the initiative, the participants' perceptions of the significance of the GCI, and identification of impediments to GCI implementation.

This study is still ongoing. It is expected that once the data collection and analysis has been completed, the findings will be used to assist in identifying the factors that influence implementation of the GCI, and the factors that contribute to the achievement of the GCI in South African HEIs.

6.   ACKNOWLEDGEMENT

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