Participants' Perspectives Regarding the Role of University Governance in Promoting Climate Change and Sustainability Interventions at University of Dar es Salaam in Tanzania

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Abstract

Higher education offers several opportunities for faculty, administrative staff, and students to contribute to climate change mitigation and adaptation as well as promote sustainability within the areas where such institutions are located. Through training, research, and community engagement functions, higher education institutions can ably contribute to sustainability and climate change response. This paper presents part of the findings from a larger study conducted at University of Dar es Salaam in Tanzania. The researcher adopted a socio-constructivist perspective to explore the perspectives and views of lecturers, administrators, and students on climate change related programs regarding the role that university governance and management can play in promoting climate change and sustainability interventions at their university. Data was generated using semi-structured in-depth interviews and focus group discussions (FGDs) from 33 participants. Data was analyzed using thematic analysis based on Braun & Clarke (2006). Findings revealed several roles that their university's governance has and continues to play in promoting climate change and sustainability interventions including integrating these aspects in the university strategy, adding climate change and sustainability to the university research agenda, and promoting sustainability practices in the management and governance processes and systems. The findings may be handy in supporting other universities to promote these aspects right from the governance levels.

Keywords

Climate Change, Sustainable Development, Education, Participation, Governance

Introduction

Climate change continues to be a serious challenge for humanity. The impacts of climate change are very serious almost for every aspect of life (Agrawal & Perrin, 2009). The phenomenon is responsible for global warming that has seriously affected the rain cycle and led to excessive heat across the globe (Celik, 2020). The summer and winter seasons have drastically changed. People experience more hotter summers and colder winters than before, which has affected lifestyles and livelihoods especially in developing nations that experience such seasons (Maharjan & Joshi, 2013). In East Asia, for example, the extremely hot summers and cold winters have led to deaths, especially among the absolute poor who cannot afford air conditioners and heating facilities during such seasons. There have been episodes of excessive floods during rainy/monsoon seasons in various parts of the developing world. In India, for example, media reports indicate that more than a thousand people die every year due to floods during the rainy season. Recently many African countries have experienced floods and landslides that have led to deaths and displacement of communities (Ford et al., 2015). We also read about episodes of wildfires in different parts of the world. These have caused damage to people's settlements and property leading many to be displaced and homeless. We continue to read about climate change induced hurricanes and other disasters that were not common in the past (Niang et al., 2014).

Water resources have been seriously affected. Many wetlands, swamps, and rivers continue to dry up due to effects of climate change and global warming. Many scientists have warned that water scarcity will seriously continue to happen in many parts of the world if nothing is done about climate change (Crick et al., 2013; Filho,

2015; GOU, 2015). The climate change phenomenon continues to seriously affect agriculture and food security across rainfed agricultural regions of the globe, especially Africa and the rest of the developing world (IPCC, 2014). Scientific evidence points to several climate-induced health infections that have affected humanity (Duenas & Ochoa, 2016; Morad & Harry, 2013; Stevenson et al., 2017). Human settlements have been affected, particularly where low-quality housing, and limited social and economic amenities like clean running water, electricity, internet connection, and sustainable clean energy especially affect low-income families. Climate change continues to threaten many people's livelihoods. Many poor people have lost their source of livelihoods and ended up becoming absolutely poor in many developing countries (Maharjan & Joshi, 2013). We continue to read about climate-induced conflicts, especially among pastoralist communities, and people who depend on rainfed agriculture across the developing world struggling to survive (Agrawal & Perrin, 2009). This has implications for the achievement of the Sustainable Development Goals (SDGs) across the globe.

In addition to the various measures to combat climate change at national and global levels through international treaties and accords at global levels and national policies and interventions at country level, institutions of higher learning could play a key role in supporting climate action and sustainability (Barth, 2015). Scientific literature (Boakye, 2015; Calzadilla et al., 2018; Filho & Pace, 2016; Higgins & Thomas, 2016) provides several potential roles that higher education could play in this space including:

- Developing and implementing study programs and courses on climate change and sustainability at undergraduate and postgraduate levels. This is aimed at creating awareness among students on these aspects as well as producing experts on sustainability. Such graduates will then integrate sustainability into their work and join the community of climate and sustainability actors wherever they go to work after university;
- Conducting scientific research on climate change and sustainability as well as innovatively disseminating findings to other actors;
- Engaging communities on climate change mitigation and adaptation for their action based on scientific research findings;
- Supporting governments and other actors to develop effective climate policy and sustainability interventions in the countries they operate in;
- Engaging in global and regional climate and sustainability governance initiatives for evidence based advise and expert support.

Governance at higher education institutions is poised to play a key role in supporting staff and students to implement the climate change and sustainability interventions as highlighted above (Finan & Nelson, 2009; Nicholson-Cole & O'Riordan, 2009; Yirdaw, 2016). This paper presents part of the findings of a larger study conducted at the University of Dar es Salaam in Tanzania. The study explored views and perspectives of university lecturers, administrators and students on climate change and stainability related study programs regarding the role of university governance in promoting climate change and sustainability interventions. The key research question was: *What are the views and perspectives of university lecturers, administrators and students on climate change and sustainability related programs regarding the role of university governance in promoting climate change and sustainability interventions at University of Dar es Salaam in Tanzania?*

The paper begins with a short description of the methodology followed by the researcher in undertaking the study. Then the key findings are presented thematically. It finally covers the limitations of the study, the conclusion and implications for policy and practice.

Methods

Research approach and design

This study was informed by a socio-constructivist perspective. This perspective holds the view that meaning is generated or constructed through interacting with people and how they view their world. The idea is to study the phenomenon through the participant's lenses and contexts. Therefore socio-constructivism emphasizes sensemaking by the researcher in the context in which the study is conducted (Denzin & Lincoln, 2005; Lodico et al., 2010). The study took the qualitative approach. The researcher attempted to explore participants' perspectives and views through analyzing individual and group experiences and interactions (Flick, 2014). A case study design based on Yin (2009) was adopted for the study. A holistic descriptive case study design, which is one of Yin's typology of case study designs, was considered to enable the researcher to fully examine the phenomenon within the selected units of the university. Data was generated from university lecturers, administrators, and students on climate change related study programs at the University of Dar es Salaam in Tanzania.

Data collection and sampling methods

Semi-structured in-depth interviews were used to generate data from nine university lecturers and administrators, while focus group discussions (FGDs) were used to collect data from 24 undergraduate and postgraduate students at the case university. The interviews were administered by the researcher using a semi-structured interview guide in a conducive environment within the premises of the university. The researcher reached out to the participants and got consent for participation as well as agreeing on the schedule for the interview. The students participated in three focus group discussions. Two FGDs were arranged for undergraduate students with each constituting eight students while the other FGD was for masters and PhD students constituting eight participants. In total. the study engaged 33 participants. A focus group discussion guide with topics for discussion was used to generate views and perspectives of the students. All interviews and FGDs were captured using an audio tape recorder. Recordings were then transcribed by the researcher and prepared for analysis. Verbatim transcription was adopted ensuring that all views and perspectives are captured to aid analysis.

Data analysis process

Data were analyzed based on Braun and Clarke's (2006) thematic analysis model with the help of MAXQDA software. The researcher followed six steps in analyzing the qualitative data as shown in Figure 1.

The researcher began by reading through the transcripts several times to familiarize himself with the data. This enabled him to have insights into the perspectives to enable coding. The analyst then did initial coding where chunks of data were highlighted and labelled with a code that most represented what the participant was saying in that chunk. During initial coding, the analyst wrote memos to reflect his interpretation and possible meaning attached to the codes. The analyst categorized the codes into broader categories to help in the search for possible themes. The broader categories then led to candidate themes which were reviewed and discussed with other experts in the area. The last phase was defining and naming the final themes that better represent the perspectives and views of study participants regarding the role of university governance in promoting climate change and sustainability at the case university. The final themes were then used to present the final key findings of the study, highlighting the key issues raised and illustrative quotations from participants for each of the themes. A descriptive write up of the key findings section was then compiled as a section in this paper.

Figure 1: Thematic analysis model
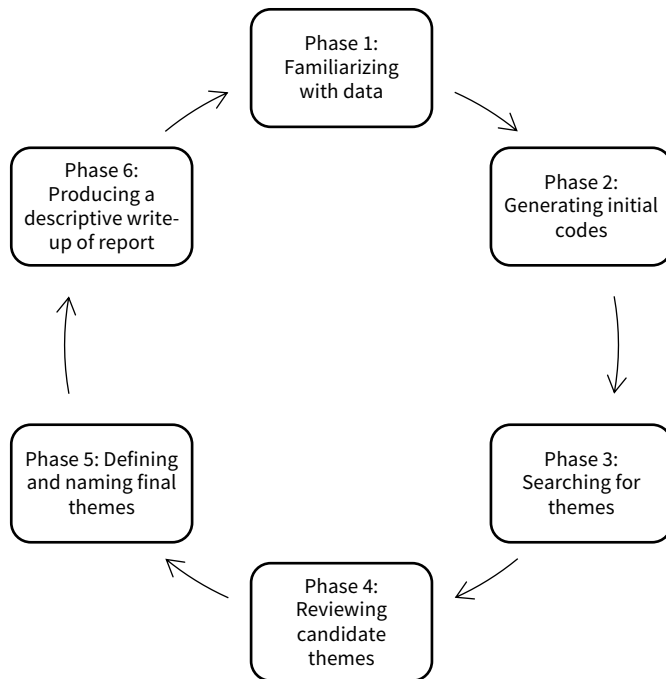
Source: Braun & Clarke (2006)

Ethical considerations

Berg and Lune (2012) call upon all researchers to uphold ethical research practice for the production of credible findings. The researcher got ethical clearance from the University Commission for Research Impact Assessment and ethics of the Carl von Ossietzky University of Oldenburg in Germany and later a research permit from the Tanzania Commission for Science and Technology. Issues of participants' consent, voluntary participation, and confidentiality were ensured during the study. The researcher ensured privacy and autonomy of participants throughout the research process as guided by Braun and Clarke (2013).

Key findings

Participants were asked to share their perspectives and views regarding the role that university governance can play in dealing with climate change and promoting sustainability. Interview and focus group data was collected and analyzed using thematic analysis. The analysis revealed several perspectives, which are organized in two themes as presented in Table 1.

Theme 1: Strategic roles for promoting climate change and sustainability interventions

Findings revealed a number of strategic roles that university governance can play in promoting climate change and sustainability interventions at the case university. These included climate change and sustainability issues in the strategic intentions of the university; influencing organizational culture and policies to embed climate friendly and sustainable practices; and investing in capacity building of both academic and non-academic staff on climate change and sustainability. The other strategic role was exploring partnerships and networks with other universities and agencies to promote climate change and sustainability. I explore each of these briefly.

Figure 2: Participant perspectives regarding the role of university governance in promoting climate change and sustainability interventions at University of Dar es Salaam

Theme	Categories
1.Strategic roles for promoting climate change and sustainability interventions	- Include climate change and sustainability issues in the strategic intensions of the university - Influence organizational culture and policies to embed climate friendly and sustainable practices - Invest in capacity building of both academic and non-academic staff on climate change and sustainability. - Explore partnerships and networks with other universities and agencies to promote climate change and sustainability
2. Operational roles for promoting climate change and sustainability interventions	- Allocate adequate resources for climate change and sustainability related university interventions - Support the development of climate change and sustainability-related study and research programs at the campus - Promote climate and sustainability friendly practices among staff and students at the campus - Reward and encourage innovations on climate change and sustainability at the university campus - Support policy engagement to promote effective climate policy and sustainability interventions

Source: Author

Including climate change and sustainability issues in the strategic intentions of the university

Findings revealed that one of the strategic roles for university governance was to include climate change and sustainability issues in the strategic intentions of the university. According to them, university governing councils and other governance units are well situated and positioned to influence inclusion of these issues in the university strategies and research agenda. In their university, the strategy is usually five years and management will focus on the areas outlined in the strategic plan for the period. This, therefore, means that resource allocation will then depend on what is included in the strategy. One of the participants noted:

> *When climate change and sustainability issues are included in the strategic plan and research agenda of the university, it is easy for management to allocate adequate resources, financial, personnel, etc. However, if these issues are missing in such plans, mobilizing resources becomes difficult. (Interview participant A).*

The participant notes that university governance determines what the focus will be in the planning period using an approved strategic plan. Therefore, resource allocation is done based on such a plan. This implies that if the issues are not included in such plans, mobilizing resources from the university and other sources will be rather difficult. This affects implementation and therefore mitigation and adaptation efforts.

Influencing the organizational culture and policies to embed climate friendly and sustainable practices

Study participants indicated that the other way university governance can promote sustainability and climate change mitigation and adaptation is by influencing organizational culture and policies of the university, in order to embed these aspects. This could be done through a review of the university values, human resource systems, procurement management processes, and leadership styles across the management and administrative structure to embed aspects of sustainability as well as climate change mitigation and adaptation. Such efforts can influence individual behavior and practices towards promoting sustainability at campus. One of them noted:

University governance through its approval processes can ably influence the organizational culture and management policies of the university. All policies are tabled in the university council for approval and, therefore, individual members can force management to embed climate friendly and sustainable practices in human resource policies, procurement systems, financial management processes, and other university systems before they are approved by the council. This will greatly enhance sustainability since management and individual staff have to follow these policies and systems during implementation of the programs. (FGD participant C).

As seen in the excerpt above, the participant calls upon the university council and other governing entities of the university to be pro-active at approval levels. They can ably influence a review of the organizational policies and systems by calling for integration of climate-friendly and sustainable practices at the campus. Once these are reviewed and the sustainability practices are integrated, they will influence the change of people's behavior, practices, and ultimately the conduct of organizational business towards sustainability. A change of individual and organizational culture will also influence the behavior and culture of communities around the university, leading to a gradual shift from unsustainable to sustainable ways of doing things within the university and the community around it.

Invest in capacity building of both academic and non-academic staff on climate change and sustainability

The other role that the university governance organs can play is investing in capacity building of both faculty and administrative staff on climate change and sustainability. Study participants called for short-term and long-term capacity building training to empower both faculty and administrative staff of the university on these aspects. For academic staff, the university could support them to attend long term courses on climate change and sustainability at masters and PhD levels within and outside the country. This would enhance their ability to train students, but also to support government through consultancy assignments and policy advise. Participants noted that investing in academic staff would have multiple benefits. This is because the staff will not only train others, but also support development of new programs and initiatives on climate change and sustainability within the university. The trained faculty will also effectively provide technical expertise to government and support policy formulation on these issues.

Study participants also argued that training administrative staff would enhance sustainable practices at campus since they implement most of the policies and influence organizational culture. These do most of the support functions including communications, procurement of essential materials and services, managing the facilities, etc. Once these are empowered on these aspects, they will enforce implementation and encourage sustainable practices on campus by all staff and students.

Explore partnerships and networks with other universities and agencies to promote climate change and sustainability

Participants identified another key role for the university governance in promoting sustainability and climate change mitigation and adaptation. To them, the university council or other entity should explore partnerships and networks with other universities, agencies, and organizations for a common voice for sustainability and dealing with climate change nationally and regionally. This could be through entering into memoranda of understanding with other entities to work together towards sustainable practices and advocating for climate policies as well as implementation of SDGs at local and global levels. This can be done at the strategic level, ensuring that institutional leaders come together to engage with governments and global governance structures to adopt climate friendly policies as well as to implement SDGs. One of them argued:

Climate change and sustainability issues cannot be handled by a single entity. They call for combined effort across institutions and national boundaries... The university council should spearhead creation of partnerships and networks with other universities and agencies, within and outside Tanzania, to combine

efforts in dealing with the climate change problem and promoting sustainable development. (Interview participant D).

The study participant above emphasized the need for the University Council to explore partnerships and networks for climate change and sustainability within and outside the country. According to him, such partnerships would enhance new ideas and working together on a common cause. It would also promote collaborative research and innovative joint programs on climate change and sustainability across the universities and agencies.

Theme 2: Operational roles for promoting climate change and sustainability interventions

Study participants explored a number of roles for the university governance in promoting climate change and sustainability at the operational level. These included allocating adequate resources for climate change and sustainability-related university interventions; supporting the development of climate change and sustainability-related study and research programs on campus; and promoting climate and sustainability-friendly practices among staff and students on campus. Other roles were rewarding and encouraging innovations on climate change and sustainability at the university campus and supporting policy engagement to promote effective climate policy and sustainability interventions. I explore each of these in detail.

Allocating adequate resources for climate change and sustainability related university interventions

One of the identified operational roles of university governance was to allocate adequate resources for climate change and sustainability-related programs at the University of Dar es Salaam. Participants indicated that the University Council approves the University annual budgets and other operational resources allocated for specific areas for implementation. Through the approval processes, the University Council can ably call for increased allocation of funding, recruitment of adequate personnel, and procurement of adequate equipment for climate change and sustainability-related programs at the university. This would boost the number of initiatives, programs, and activities designed and implemented to deal with climate change and promote sustainability at the university campus and communities around it. One of them said:

All university budgets are approved by the University Governing Council. The members of the council can ask questions and management will listen to them. They can force implementors to adjust budgets and reallocate to particular aspects planned for implementation. I think this can be an opportunity to influence allocation of adequate resources and recruitment of enough personnel to implement climate change and sustainability programs. Our units will now be well equipped and well-resourced with experts on these aspects. (FGD participant H).

Such a role, according to the participant, can be carried out through deliberately mobilizing adequate financial and material support for these interventions with the University Council taking a lead.

Supporting the development of climate change and sustainability related programs at campus

The other role identified in the data was supporting the development of climate change and sustainability-related study and research programs at campus. The study participants argued that the University Council is in a better position to influence other governance entities like the senate, school boards, and departments to develop study and research programs on climate change and sustainability at campus. This can be done through deliberate support to faculty and research units to develop such programs and courses including cross cutting courses for integration into other existing programs. The university governance entities can include climate change and sustainability on the university research agenda and support faculty to do research on these aspects. One of them noted:

Even though the University Council doesn't participate in the approval process of study programs because that is a role for the University Senate and the school and departmental boards, it can influence these other units to develop such programs. Through its sub-committee on programs and quality assurance, it can ably influence Senate and other governance units to encourage academic staff to come up with innovative study and research programs on climate change and sustainability aspects within the university campus. (Interview participant E).

Promoting climate and sustainability friendly practices among staff and students at campuses

Study participants argued that governance units within the university can ably promote sustainable and climate friendly practices within the university campus aimed at reducing GHG emissions. This could be through investing in renewable energy sources for use within the university campus, greening the campus. and encouraging students and staff to use climate friendly travel options and proper management of waste as well as sustainable use of water (adoption of water efficient measures). According to them, the University Governing Council and Senate as well as school and department boards can be handy in promoting adoption of climate friendly practices on campus. During the interaction with one of them, she noted:

The University Council and Senate are very influential organs of the University of Dar es Salaam. Every staff and student will always want to implement policies and decisions of these two organs. This implies that if any of these organs or both of them decide to promote climate friendly and sustainable practices, every staff and student would follow suit. They will implement to the dot. (FGD participant F).

The participant explained the level of influence of the two governing bodies of the university and how this level of influence on staff and students can be exploited to promote climate friendly and sustainable practices at campus. This is a huge opportunity and could significantly contribute to climate change mitigation and adaptation as well as sustainability on the university campus.

Reward and encourage innovations on climate change and sustainability on the university campus

The other role that university governance organs can play in promoting climate change and sustainability at the university is rewarding and encouraging innovations on these aspects. Study participants noted that the governance organs can put in place systems to reward and encourage innovations on climate change and sustainability. The university governance entities could for example reward staff (administrative or faculty) that are exceptional in adopting climate friendly practices and those that have come up with exceptional innovations that promote sustainability within the University. The entities could also explore putting in place a climate friendly staff of the year or climate friendly unit of the year through a competitive selection process with a special prize or award given to such an individual or unit. One of the study participants noted:

If our council put in place an annual contest or recognition event where staff and students who have come up with innovations and have adopted climate friendly practices are rewarded, many of us will work hard for such awards. A reward scheme on climate change and sustainability will be a big motivator for us to promote sustainability and innovate for climate change adaptation. This is an effective way to promote sustainability at campus. (FGD participant B).

Support policy engagement to promote effective climate policy and sustainability interventions

Another role that the university governance can play is to support policy engagements aimed at promoting effective climate policy and sustainability interventions at various levels of government. Participants argued that the University Council is well positioned to support governments at local and national levels to formulate and implement effective policies on climate change and sustainability. According to them, the university council can

promote engagement of policy makers and actors during policy formulation, implementation, and evaluation. One of them noted:

> *The University Council has a lot of influence in our university. The organ can influence the policy engagement agenda of the university and therefore could easily determine the areas where the university will focus in engaging policy makers and other actors. If they decided to focus on climate policy and sustainability issues as areas for policy engagement, academic and administrative staff will therefore put all their energies in engaging policy makers at any stage of policy formulation, implementation, and evaluation. This would enhance the quality and effectiveness of climate policy and sustainable programs in our country, Tanzania. (Interview participant G).*

This role is very key in promoting effective climate policy and implementation of sustainability. As indicated by the participant above, university governance organs can influence engagement of government and other actors on effective climate policy and sustainability interventions through policy dialogues organized by the university and policy briefs and consultancy support services related to climate policy and sustainability interventions.

Limitations of the study

The study findings emerged from interview and focus group data collected from university lecturers, administrators, and students at the University of Dar es Salaam in Tanzania. This was a purely qualitative study and therefore findings cannot be generalized to other universities beyond the case university. The findings are from the views and perspectives of those who participated in the interviews and focus group discussions. This means that the findings represent the experiences and opinion of only those that participated. Other lecturers, administrators and students that didn't participate may have differing perspectives on the topic of study. However, the findings could be transferable to similar settings and ignite a context-based debate on what governance organs in other universities could do to promote climate change and sustainability interventions in their own settings.

Conclusions and implications for policy and practice

Theme 1: Strategic roles for promoting climate change and sustainability interventions

Findings indicated that the university governance organs have roles they can play in promoting climate change and sustainability interventions at the strategic level. These strategic roles relate to their use of power to influence the strategic intentions of the university (strategic plans) and organizational culture and policies to promote climate change and sustainability interventions. The organs can also use their power to influence investment in capacity building of staff and creating networks as well as partnerships for climate change and sustainability interventions. Based on these findings, therefore, university governance system participants should be sensitized and given some training to appreciate the need for them to promote these issues and influence their systems for inclusion and implementation of interventions on these aspects. With respect to policy and practice, the findings are handy for university policy makers to influence their governance organs to play these roles at the strategic level. A review of the university policies will be needed to incorporate these issues and ensure that all staff and students promote them as well as initiating effective interventions on climate change and sustainability.

Theme 2: Operational roles for promoting climate change and sustainability interventions

Findings revealed that the University Governance Council and Senate are powerful and dominant organs to influence operational systems and practices at the university. They are able to influence allocation of adequate resources for climate change and sustainability interventions, promote sustainability friendly practices among staff. and support policy makers and governments to formulate and implement effective climate policy and sustainable development goals. The implication of such roles is that the lower-level management and staff will be able to innovate effectively and implement effective interventions on these aspects since the governance supports

them. Policy makers and practitioners will then need to orient and develop the capacity of actors in university governance to appreciate the need for them to influence the operational systems and practices with the aim of promoting climate change and sustainability friendly practices on campus.

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