Achieving quality and education for sustainable development in higher education management the Zimbabwean experiences

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Abstract: **The African continent continues to support UNESCO's and United Nations Education for Sustainable Development (ESD) lifelong efforts of deepening and widening access to higher education extending to distance education initiatives. Sustainable development in education is understood as the provision of quality and prosperous education, which is sustainable for the environment and has become the world's first and most important concern, as it is the only path towards economic development, eradication of hunger and survival of our species. Sustainable quality education entails the acquisition of both physical and intellectual skills which will enable individuals to be self- reliant and useful members of society. Education for sustainable development encompasses improving higher education, reorienting the education system to address sustainability, improving awareness and providing training to many sectors of society. The rapid growth of higher education in Zimbabwe seems to inevitably lead to the belief that mass higher education has been achieved at the price of lower quality higher education. Using semi structured face to face interviews with higher education directors, and purposely selected students from three universities, the study established that Zimbabwe was still facing multiple challenges of providing quality sustainable higher education and would require a quick fix. In this study we argue that quality higher education is crucial to achieve the sustainable development goals and the achievement of quality learning in the entire education system. The chapter highlights some of the strategies that can be adopted to achieve sustainable quality higher education in Zimbabwe and probably Africa as a whole to promote excellence, sustainability and development in higher education.**

Key Words: **Distance education, education for sustainable development, higher education, quality education, sustainable education, teaching and learning.**

I. INTRODUCTION

This article explores the major challenges of providing quality, sustainability and development in higher education in Zimbabwe. The paper examines the specific targets of quality and sustainability in higher education and teacher education, focusing on the specific targets of the fourth United Nations Sustainable Development Goal (SDG4) on quality education (WEF 2016). Specifically, target 4.7 of SDG4 which will be discussed in greater detail requires all governments by 2030 to: ensure that all learners acquire the knowledge and skills needed to promote sustainable development. Its aim is to explore the complexity of raising quality sustainable higher education learning suggesting the need for multiple actors to cooperate closely in enhancing quality and sustainable higher education in Zimbabwe. The theoretical viewpoint of this article resonates with the thoughts (Giddens 1984; Bourdieu 1984) on structure and agency to offer deeper insights into the role quality higher education plays in providing for sustainability and development and also examining how higher education is evolving towards achieving the specific targets by 2030. The article opens with a brief literature review examining the provision of quality higher education for sustainable development in line with the United Nations Sustainable Development Goals; this is followed by a discussion on the provision of quality higher education the world view with a section focusing on structure and agency as a lens guiding the study. This is followed by a brief methodology and the presentation of findings from our study. Finally we present our discussions together with recommendations on enhancing quality teacher education for sustainable development.

Sustainability and development towards achieving quality in higher education

Sustainable development is understood as the existence of a prosperous and fair economy which is sustainable for the environment and it should become the world's first and most important concern as it is the only path towards the survival of our species (Blanco-Perez, Perez-Casares, Rodrigafiez-Riesco, 2019). Quality higher education in general has long been considered as an essential springboard for sustainable development and economic growth. Developing countries have come to regard higher education as fundamental to political, social and economic emancipation and are consequently investing huge resources in higher education. It is a fundamental instrument for developing human capital that services various institutions and other structures. Central to the argument that quality higher education is a prerequisite for sustainable development is the belief that any nation that desires to progress and develop must invest in human resources and this can only be achieved through quality higher education programmes and training that focuses on the

acquisition of basic skills necessary for national development (Shava., Nkengbeza, Ntabi., and Maemeko, 2016). Quality higher education lies at the heart of all development as higher education makes a difference to the quality of a country's workforce (UNESCO, 2004). The American Commission on Teacher Education also argues that the quality of a nation's citizens depends upon the quality of its education, and the quality of education worldwide depends largely upon the quality of its teachers (UN, 2000).

Higher education of good quality is a central focal factor for national development because the entire sector in the society depends on human resources for efficient work and continuous sustainable development. To produce capable citizenship of high quality, we need high quality education and to achieve this we need to improve the quality of our higher education and develop educational standards that contain local and national issues. Education for a more sustainable development for the future includes improving quality basic education, reorienting education to address sustainability, improving public awareness, and providing training to many sectors of society. This therefore means that higher education institutions and teacher educators are key change agents in orienting education to address sustainability.

Quality and education for sustainable development in Higher education

The notion of quality in the context of higher education is hard to define precisely (Hanushek & Wossmann, 2007) where universities have broad autonomy to decide on their own visions and missions. The rapid growth of higher education systems in the Southern African region has raised concerns about quality, sustainability and development of the education system offered by higher education institutions. Sustainable development is understood as the existence of a prosperous and fair economy which is sustainable for the environment and should become the world's first and most important concern as it is the only path towards the survival of our species. In this sense, ratification of the Paris Climate Agreement and other declarations like the Incheon declaration 2030 offer unique and valuable guidelines for the implementation of Sustainable Development Goals as key framework and also define ambitious objectives (WEF, 2016). To achieve true sustainable development and quality in higher education, humanity needs to be empowered with good ideas and clarity of thought, policies should be about well-being and the common goal should be the priority (Carlos Blanco-Prerez., Perez-Casares & Rodriganez-Riesco, 2019). The goals of sustainable development especially in education are ambitious because the challenges that are faced can become irreversible catastrophes. The United Nations Sustainable Development Goals on the current global education policy and system climate, which is strongly oriented towards various benches, indicators and targets (Oziga 2012). Education for a more sustainable future includes improving quality higher education, reorienting the education system to address sustainability, improving public awareness, and

providing training to many sectors of society. Higher education institutions the world over should seek to orient their curricula to address issues of sustainability and teacher educators are key change agents in orienting education towards addressing sustainability. The United Nations Sustainable Development Goals (SDGs) are not the first set of goals designed to help nations work together towards creating a clear planet and more just global society. The initial Millennium Development Goals (MDGs) were formulated in 2000 at the Darkar Framework for Action and included eight goals to be achieved by 2015. These are (1) to eradicate extreme poverty and hunger; (2) to achieve universal primary education; (3) to promote gender equality and empower women; (4) to reduce child mortality; (5) to improve maternal health; (6) to combat HIV/AIDS, malaria and other diseases; (7) to ensure environmental sustainability; and (8) to develop a global partnership for development (UN, 2000, Gaby, 2015; WEF, 2000). The second goal specifically focused on universal primary education but remained silent about quality in education yet universal education of poor quality is meaningless, learners need to exit the education system with skills and competences for their survival.

On 1 January 2016 an ambitious new plan was launched at the Incheon Declaration, which increased the number of goals from eight to seventeen with Goal 4 seeking to: ensure quality education for all (Palmer 2015; WEF, 2016). This therefore implies that education for sustainable development is far more than teaching knowledge and principles related to sustainability but in its broadest sense, it is education for social transformation with the goal of creating more sustainable societies to address through education, and numerous interrelated challenges like quality in education (UNESCO, 2017a). The idea of lifelong learning for all is a key element of education for sustainable development and also specifically addressing sustainable development goal four which was the emphasis of UNESCO's Sustainable Development Goals. This suggests that quality higher education can act as a powerful engine towards a developed, sustainable and a more cohesive and equal society. Quality higher education (Panetta & Williams, 2018) can also include increasing skills in relation to learning for sustainability, such as care for our planet (SDGs12 & 13). SDG4 has been further broken down to ten targets based on the different roles to be fulfilled by different players (Boeren, 2019; WEF, 2016; UNESCO, 2017B).

In this study we argue that education for a more sustainable future includes improving quality basic education stretching to higher education, reorienting education to address sustainability, improving public awareness and providing training to many sectors of society and there should be an effort among developing countries to make available high quality teacher training institutions including distance education for teachers to fulfil the need of developing countries. The vision of quality sustainable development in education is to transform lives through education recognising the importance of higher education as a main driver of

development. Distinctly, in this article higher education is a public good, a fundamental human right and basis for guaranteeing the realisation of other human rights, it is essential for peace, tolerance, human fulfilment and sustainable development. Education is key to achieving full employment and poverty eradication among other things, there is a need to focus efforts on access through distance education, equity and inclusion, quality and learning outcomes with a lifelong approach. Further understanding the possibilities for higher educational institutions, relevant stakeholders and governments need to work together to achieve SDG 4 and the other goals might thus increase knowledge of potential routes to progress.

II. RESEARCH QUESTIONS

The article focused on the following research questions:

1. In what ways if at all, does higher education teaching and learning provide for quality and sustainable development for the learners?

2. How does higher education integrate sustainability principles in its programmes?

3. What policies are put in place if at all for sustainability and development in higher education?

4. How, if at all, does higher education focus on sustainability and development Goal 4 which is oriented towards the achievement of educational quality with a lifelong framework?

5. How does Zimbabwe's higher education strengthen the integration of Education for Sustainable Development?

Theoretical framework: Culture, Structure and Agency
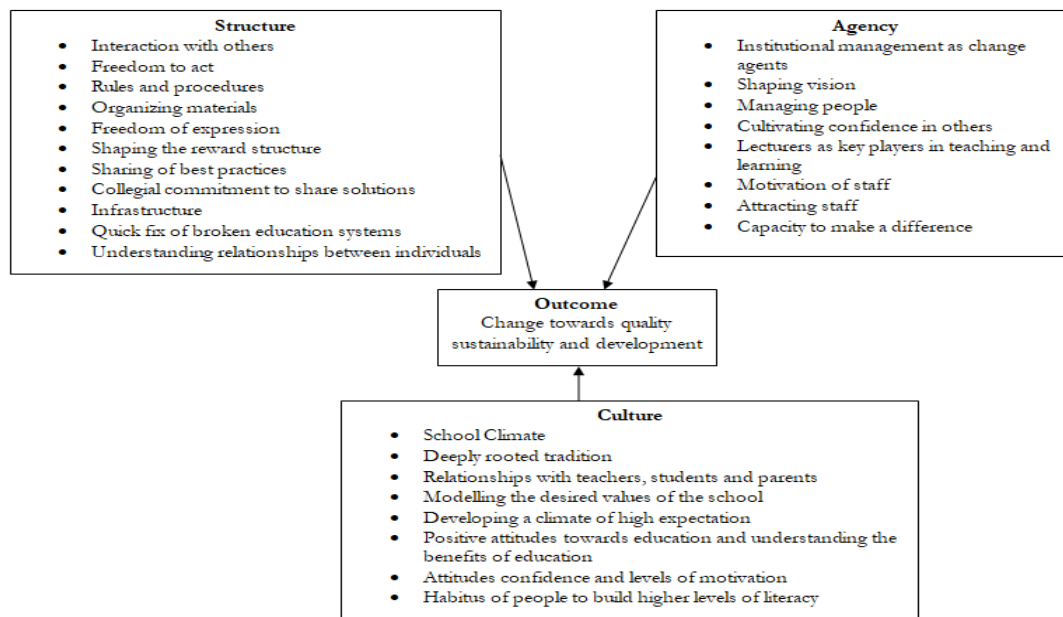
The theoretical viewpoint of this study resonates with the thoughts of Margaret Archer's (1995) Social Realist Theory of Structure, Culture and Agency to analyse how higher education in Zimbabwe integrates principles of quality, sustainability and development in teaching and learning. Critical realist theory according to Archer (1995) accepts that there exists a reality independent of our representation of it but acknowledges that our knowledge of reality is subject to all kinds of historical and other influences. The Social realist theory according to Archer (1995) comprises of three milieus of structure, culture and agency which are superimposed on each other. The structural milieu (Archer 1995) comprises of roles, organizations, institutional structures, systems, policies, committees, substructures and positional levels within the organization. Structure also includes the material conditions which would motivate action (Archer 1995, 1996, 2003). These structures constrain or enable the actions of the agent. Culture mainly focuses on the way of life of a specific group of people which encompasses behaviour, beliefs, values, customs, relationships and special symbols. Agency refers to the personal and psychological makeup of individuals, their social roles and relates to the capacity people have to act in a voluntary way (Boughey 2012; Giddens, 1984; Bourdieu, 1984; Boeren, 2019). In any setting Archer (2003) argues, there are structural, cultural and agential properties which play a role of enablers or containers. Specifically the concept of structure and agency according to (Giddens, 1984; Bourdieu, 1984; Boeren, 2019) is interested in the structure of social reality and the extent to which individuals are free to act within the structure. The figure below provides a general picture of the interplay of structure, culture and agency towards quality, sustainability and development in higher education.

Figure 1. A general picture of the interplay of structure, culture and agency towards providing for quality, sustainability and development in higher education teaching and learning

III. RESEARCH DESIGN AND METHODS

The qualitative research of a phenomenogical nature was employed as the most appropriate method to collect, analyse data and draw conclusions because it is most suitable in restricting any form of preconceived bias from the researchers that might cloud the opportunity to understand issues of quality, sustainability and development in higher education teaching. A qualitative research approach embedded in an interpretive paradigm was considered suitable for this exploratory study. The interpretive paradigm and the specific phenomenological design enabled the researchers to look, hear and understand the particular meaning inherent in people's lives within selected institutions. Henning, Van Rensburg and Smith (2004) argue that the feelings and values to which human beings ascribe cannot be quantified or measured, but rather interpreted from an insider perspective. Using purposive sampling with the assistance of the Directors we went on to establish participants for the study. Purposeful sampling is a valid form of sampling, with a phenomenological research design, where the researcher chooses information rich cases to explore the perceived issues of quality, sustainability and development in education. Gender representation of participants was considered and an equal number of both gender groups were chosen.

Data collection methods

The strong desire to collect data that reflected the perspectives of the research participants resulted in the choice of in- depth, unstructured interviews with participants. Contact interview sessions ensured direct contact with participants and improved the researchers' understanding of their perspectives. Creswell (2013) shows that interviews present the researcher the means to get hold of the experiences, knowledge, thought and feelings of the participants. Data collection which took about one hour with each participant was done in the month of May 2019. We followed Bernard's (2002) lead, "the idea was to get people to open up and let them express themselves in their own terms, and at their own pace (p.206). Participants were coded as D1 to D4 for the directors, L1 to L6 for the lecturers and SD1 to SD 6 for the students; this was meant to protect their identity.

In seeking trustworthiness, Lincoln and Guba (1985) indicate that the researchers should be concerned with activities that increase the probability that credible findings will be produced. Prolonged engagement which is the investment of sufficient time to achieve certain purposes, learning the culture, testing for misinformation introduced by distortions either of the self or the participant, and building trust, member checks by requesting an external coach to review the manuscripts accuracy and clarifications on the sequence of events, and peer debriefing were used to promote confidence that the researchers had accurately recorded the phenomena under investigation. Before the interviews we made contacts with each participant through their emails and telephonically to establish a relationship of trust. Participants were encouraged to communicate voluntarily within an atmosphere of trust and rapport and they were not put under any pressure to share their views. These multiple efforts to ensure trustworthiness supported the on-going data analysis, as the researchers worked to code the data by themes into spread sheet files, while carefully looking for data that would discount any emergent themes.

Discussion of data and emerging main findings and conclusions

Data analysis is a systematic search for meaning. It is a way to process qualitative data so that what has been learned can be communicated to others. Analysis means organizing and interrogating data in ways that allow researchers to see patterns, identify themes, discover relationships, develop explanations, make interpretations, mount critiques, or generate theories. There were multiple efforts to ensure that trustworthiness supported the on-going data analysis as the researchers worked to analyse the data by entering themes into spread sheet files while carefully looking for data that would discount any emergent themes. We recorded interviews after transcribing them and analysed using a grounded theory approach. The constructivist perspective means that the codes, labels and themes are developed while reading and rereading the data, which represents the reality as experienced by the participants (Silverman, 2014). This process allowed the researchers to interpret the data in a reciprocal process between the data and the theory. Specific codes were identified by reading the text several times while the codes were reduced or relabelled or collaborated.

The categories were combined and linked with the themes of quality, sustainability and development in higher education which provided the themes for our discussion of the data. The themes emerged from codes and categories through a process of first reading individual interview responses. The aim was to ensure that the themes reflected the most important issues raised by participants. The aim of the study was to explore how higher education teaching and learning in Zimbabwe provides for quality, sustainability and development and establishing challenges associated with ESD with specific reference to the specific targets within the fourth United Nations sustainable Development Goal 4 on quality education and education for Sustainable Development.

Challenges facing higher education in fostering lifelong learning

The current human population in Zimbabwe is approaching 15 million and it is important to understand that each of these individual agents live within a structured environment which is defined by its own rules and resources. Thus, to understand the complex reality of providing education for sustainable development it is not enough to draw on individual or structural perspectives but a combination of both perspectives is necessary. Grounded on the participants' accounts the presentation of findings includes the personal perspectives and reflections about their involvement in education for sustainability and development. Comments made by all participants interviewed showed that the concept of education

for sustainability and development was not familiar with them. D2 for example noted that the current system of higher education does not promote or address issues of quality sustainability and development among the learners. He identified the following areas as necessary for quality, sustainability and development:

- The level of expertise among lecturers who are teaching the way they were taught at university and lower levels of learning.
- Lack of top management commitment towards education for sustainable development and lack of knowledge leading to resistance to change.
- There are no standards and quality assurance monitoring structures in higher education to monitor and ensure accountability among the agency at the micro-meso and micro level perspectives of higher education levels
- Total lack of staff expertise and willingness to participate in education for sustainable development programmes and activities.
- Increasing access and equitable quality education and lifelong learning for all cannot be achievable without policies, and the political will.
- Zimbabwe and the rest of the Southern African region is far from having reached education for all and more still achieving Millennium Development Goals formulated way back in 2000.
- The majority of staff in higher education institutions is not familiar with the idea of lifelong learning for all which is the key element of SDG4.

During interviews with participants, it emerged that the implementation of ESD in higher education was not an easy undertaking since it requires strengthening inputs processes and evaluation of outcomes and mechanisms to measure process. D3 commented that:

Educators need to be empowered, adequately recruited, well trained, professionally qualified, motivated and supported with well resourced, efficient and effectively governed systems and structures. This way of thinking and approach is in line with Giddens' structural and agential theory which aims to understand the relationship between individuals and the structures around them (Giddens 1984).

Integrating ESD in higher education teaching and learning

While there are multiple structural, agential and cultural challenges of fostering ESD in higher education teaching and learning, interviews with both lectures and regional directors revealed that higher education institutions are making efforts to integrate ESD in teaching and learning. Interviews with participants indicated the need to integrate ESD in teacher education since teachers are the central focal factor for national development because the entire sector in society depends on human resources for different work and continuous development. It emerged from our discussions with participants that Zimbabwe is making significant efforts towards integrating ESD through:

- Organising national workshops on ESD for lecturers from universities and Teachers' colleges.
- Capacity building for lecturers and teachers on ESD to strengthen the integration of ESD goals.
- UNESCO offices in Zimbabwe working with the government to integrate sustainability and development principles and strategies into education and training environments with emphasis on curriculum change in teacher education institutions.
- Reorienting teacher education to address issues of quality, sustainability and development.
- Incorporating issues of ESD in teaching subjects at both Bachelor of Education and Masters Levels and in teachers' training.
- Investing and interventions in ESD in higher education institutions with a strong focus on science and technology fields of study.
- Enhancing and empowering higher education institutions to contribute more effectively to the adoption of ESD principles and more specifically the achievement of sustainable development goals.
- Monitoring and ensuring the idea that reaching the SDG4 targets is a responsibility shared among individuals, education and training institutions, and regulating governments.
- Monitoring progress towards the achievement of benchmarks indicators and targets of SDG4 on quality education.
- Monitoring the implementation of education participation and progression and the learning environment and organisation of higher education teaching and learning.
- Raising awareness of benefits of ESD and learning among citizens and policy-makers.
- Putting better quality monitoring systems in place.
- Bring education and training opportunities to the people like mobile schools, reliable internet infrastructure and distance education opportunities, these initiatives increase equity and access to education.
- Building partnerships with other related stakeholders.

Through the integration of these strategies there is a high likelihood of a "quick fix" of the broken quality of higher education system and there is an understanding how systems of education are embedded in the wider economic, social, cultural and political context

Addressing Sustainable Development Goal 4 oriented towards achieving quality, sustainability and development in higher education

On the question addressing sustainable development Goal 4 oriented towards achieving quality, sustainability and development the study participants acknowledged the importance of engaging several stakeholders in order to achieve the goal which focuses on quality education. One of the directors reported that:

To attain true sustainability and development in higher education people need to be empowered with good ideas and clarity of thought, and the common good should be the priority. Besides, higher education institutions should be supported by high quality infrastructure if we are to achieve quality teaching and learning.

In this study participants identified the following as key issues to address sustainability and development in higher education:

- Parents recognised the importance of higher education and encouraged their daughters and sons to go for higher education.
- Availability of high quality higher institutions with quality infrastructure.
- Adequate funding for higher education by responsible governments and increasing equal access to higher education and vocational training.
- All people (eliminate gender disparities) have confidence that they can be successful in higher education regardless of their personal characteristics or backgrounds.
- Attracting quality staff in higher education to deal with groups with special needs.
- Adequate funding for affordable and quality technical, vocational and tertiary education by responsible governments, and a cultural shift towards perceiving higher education as making a positive contribution to society.
- Ensure equal access to higher education, there is a need to provide adequate funding for higher education and training institutions catering for the needs of vulnerable groups and provision of training for lecturers working with vulnerable students.
- Availability of affordable and quality technical, vocational and tertiary education, including universities and distance education programmes.
- Governments making quality, sustainability and development a core part of the compulsory educational curriculum and system and providing adequate funding.
- Higher education and training institutions adopt a cross- course approach to themes of sustainable development, providing intra and extra mural activities focusing on sustainable development.

All these suggestions according to the study participants are the possible measures of addressing Sustainable Development Goal 4 which is oriented towards achieving quality education especially focusing on culture, structure and agency and also at macro, meso and micro levels. According to (Boeren, 2019) each of these targets are broken down based on the different roles to be fulfilled by players at the micro, meso and macro levels and it is important for these levels to work together and complement each other, which is also in line with the structure and agency philosophy. The reason of breaking the targets according to (Boeren, 2019; Addey, 2017; Hamilton, 2017 and UNESCO 2017b) into different perspectives is to increase knowledge of underlying actions that might help in reaching or addressing the targets.

Strengthening Education for Sustainable Development in higher education

Education for sustainable development means improving the quality of teaching and learning together with ensuring the reorientation of the curriculum to address sustainability. Teacher education institutions and teacher educators are key change agents in reorienting and strengthening education systems to address sustainability. It emerged from the study that teacher education institutions serve as key agents in transforming education and society. Teacher education in Zimbabwe is taking a leading role to prepare students and provide the transformation and knowledge to achieve a sustainable society.

One of the participants drawn from teachers argued that teacher education in Zimbabwe has the potential to equip people with skills needed to improve their livelihoods.

In summary teacher education was identified as a key player in strengthening ESD through

- Teacher education institutions ideally situated to play a central role in educational reform.
- Supporting global implementation of ESD where there is need for international cooperative programmes for administrators and curriculum developers.
- Teacher education provides skills among teachers to face the class and challenges associated with teaching
- Teacher education creates curriculum and provides advice to local schools and because of this broad influence in the education community, teacher education institutions are perfectly situated to promote ESD.

Policies for quality and sustainability in higher education

To support global implementation of ESD in higher education we need to have policies that address key issues of quality, sustainability and development. If we are to achieve ESD we need policies to ensure that educators and their management understand the concept of sustainability and development and that all stakeholders are familiar with its principles. Study participants identified the following as key policies for ESD.

- Policies on equitable and quality in higher education, widening and deepening access to higher education.
- Making higher education affordable for all who wish to learn (*fees must fall in the South African situation).*
- Policies that provide for high level job creation by responsible governments, and schemes to encourage employers to invest in their employees.

- Introduction or maintenance of active labour market policies including skills training.
- Policies on integrating literacy and numeracy evaluation in quality control mechanisms for accessible higher education.
- Policies to provide for adequate funding for adult education and training institutions offering literacy and numeracy courses.
- Policies on maintaining quality control systems for higher education and training, systems that meet international standards (Quality Assurance structures or units).
- Policies to ensure that ESD is taught in a cross disciplinary way, in science as opposed to in the arts and humanities. ESD by nature is holistic and interdisciplinary and depends on concepts and analytical tools from a variety of disciplines.
- Policies to ensure that higher education programmes fit the environmental, social, economic conditions and goals of their communities, regions and nations.
- Policies that motivate more girls and women to enter the fields of Science, Technology, Engineering and Mathematics (STEM).
- Policies on the need to follow a set of requirements in order to grant standardised recognised qualifications.
- Policies on the provision of training programmes for the unemployed and strong technical and vocational education, policies to ensure the achievement of the ten SDG 4 targets.
- Policies that place strong accessible systems of education and training leading to stronger knowledge based infrastructure.
- Adopting policies and support mechanisms that allow for more integrated forms of teaching and learning.

All in all education policies should be embedded in a wider range of social policies including health, employment and social security.

Higher education leadership commitment to achieving Sustainable Development Goal 4

Higher education leadership worldwide plays a key role in developing and maintaining successful and effective education systems. International research evidence has consistently reinforced the important role played by education leadership in sustaining higher education improvement and quality teaching and learning. It is also clear from this article that effective leaders exercise an indirect and powerful influence on the achievement of ESD Goal 4. The study participants indicated that the maintenance of high quality standards of teaching and learning and probably the achievement of ESD Goals in higher education largely depends on the extent to which leadership is committed and effectively carry out their leadership responsibilities together

with their commitment to achieve higher standards of teaching and learning. One of the study participants had this to say:

Leadership in higher education just like in any other system creates a conducive environment and structures to support quality teaching; leadership has a direct responsibility for quality teaching and learning and for the achievement of ESD Goals. Leadership creates a culture hospitable to quality learning and foster the achievement of quality teaching.

Thus leadership is considered crucial to educational change and attainment of ESD. The key strategies adopted by higher education leadership involve setting direction, developing people, redesigning the institutional organisation, and managing teaching and learning programmes so as to enhance organisational change and development. The importance of leadership commitment was highlighted in this study and literature has consistently emphasised the important role played by higher education leadership in enhancing the achievement of ESD Goals. Grounded on the participants' accounts, findings from the study point to:

- Leadership setting expectations, standards and monitoring the implementation of ESD in teaching and learning and also ensuring monitoring by lower levels of leadership at departmental level.
- Ensuring that institutional expectations are supported by quality assurance structures in higher education
- Ensure the provision of appropriate and safe facilities at the institution
- Ensure the availability of acceptable standards in terms of physical, human, financial and material resources, management and operational procedures, and acceptable standards of academic life focusing on teaching, research, public and expert service.
- Making the necessary resources available for quality teaching and learning and ensuring accountability among all stakeholders.
- Establishing structured institutional quality assurance policies and processes in the institution. Prioritising effective quality assurance mechanisms in the institution's strategic plan.
- Monitoring progress towards achieving ESD Goals.
- Supervising the implementation of ESD curriculum.
- Providing incentives for those implementing ESD
- Promoting professional development linked towards the implementation of ESD.
- Managing the teaching learning processes.
- Coordinating curriculum
- Defining the instructional goals.

All these functions and roles are driven by the importance attached to higher education as a driver of growth and in achieving the Millennium Development Goals (MDGs) and more specifically the effective implementation of ESD Goals in higher education.

One of the directors argued that higher leadership needs to invest in higher education and research and development since investing in higher education is as important as investing in

bridges and roads or physical capital and physical infrastructure. Leadership in higher education therefore, plays a leading role in reinforcing ESD in national and regional education and sustainable development policies. Leadership also came up with policies to influence the achievement of SDG4 targets. This is done by strengthening ESD and professional networks in their institutions of higher learning and teaching. Higher education leadership can also engage stakeholders in developing programs, governance and management structures and the implementation of ESD. This can be done through leadership adopting policies and support mechanisms that allow for more integrated forms of teaching and learning. Moreover leadership can ensure sufficient funding to invest in ESD and a commitment to the themes of all SDG 4 targets. Higher education institutions are more likely to be successful in achieving SDG 4 targets if leadership attracts highly qualified staff and engage in effective and efficient educational leadership, and stay on top of their resources and make efforts to motivate staff towards implementing ESD and reaching out to their local communities to make their educational offers known.

The interplay of structure and agency towards achieving sustainability and development in teacher education teaching and learning

The success of ESD in higher education depends on the effective interplay of structure and agency. Organisational structures and their agency play a major role in enhancing education for sustainability and development and the entire achievement of (MDGs). According to Boeren (2019) the concept of structure and agency is interested in the structure of social reality and the extent to which individuals are free to act within that structure. While structure in the educational context relates to the rituals and procedures that are followed to ensure the achievement of organisational goals, it also includes domains such as roles, organisations and institutional structures, systems, policies, communities, substructures and positional levels within the institution. The organisational structure is the skeletal framework within which people carry out their work. Structure as suggested by Archer (1996) refers to the bureaucracy, resources, human relations and the power that people exert on other people. People are born within structures that have autonomous existence, and these structures frequently constrain the meanings which can be imposed on them and these structures have a causal influence on people's behaviours and actions which may affect the achievement of goals. The existence of these structures imposes on the intentional actions of agents. The agential level of analysis recognises the power that people have in shaping reality and influence quality processes in an educational system. In this study we established that:

- The adoption and provision of quality effective teaching and learning depends on agential powers of the staff who have the capacity to make a difference.
- Staff members ensure that all learners are supported.
- Directing structural changes that will establish positive conditions for ESD.
- Building an organisational structure and culture which reflects the vision and values of ESD
- Enabling management systems and processes to work effectively and efficiently in line with all legal and regulatory requirements.
- Managing an equitable deployment and development of the education system.
- Creating structures in institutions in a drive to enhance the culture of teaching and learning.
- Initiating structures to involve all members of staff in decision making and implementation and arranging workshops to orient staff on ESD.

Figure 2 below shows the interplay of structure and agents in enhancing ESD.
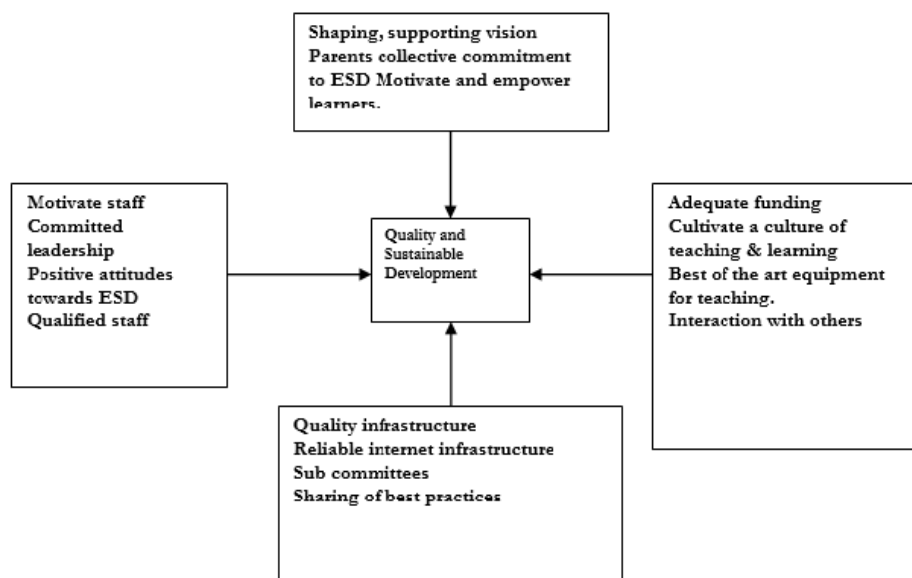
Education for sustainable development allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future and this can be achieved through the effective and efficient interplay of structure and agents. ESD consequently promotes competences like critical thinking, imagining future scenarios and making decisions in a collaborative way.

IV. DISCUSSION QUALITY, SUSTAINABILITY AND DEVELOPMENT

There is generally a lack of agreement and literature on how to define ESD; however as a broad concept ESD brings a distinctive orientation to many important aspects of education, including access, relevance, equity and inclusivity. Education for sustainable development includes improving quality education and reorienting education to address sustainability, improving public awareness, and providing quality training to many sectors of society. The three pillars of ESD are economic, environment and social. It is a process of learning how to make decisions that consider the long term future of the economy, ecology and the equitable development of all communities (UNESCO, 2012). Special forms of ESD on Goal 4 are oriented towards the achievement of educational quality with a lifelong learning framework. Specifically, target 4.7 of SDG4 requires all governments by 2030 which is 15 years after the Dakar Framework of action. This implies that ESD is far more than teaching knowledge and principles related to sustainability, but it is in its broadest sense, education for social transformation with the goal of creating more sustainable societies to address through education at all levels, numerous interrelated challenges like, poverty reduction, environmental protection, social justice and education of high quality (UNESCO, 2012). More specifically, ESD is about learning to:

- Respect other people and their culture.
- Value and preserve the achievement of the past.
- Appreciate the wonders and the people of the earth.
- Live in a world where all people have sufficient food for a healthy and productive life.
- Access, care for and restore the state of our planet.
- Create and enjoy a better, safer, more just world.
- Be caring citizens who exercise their rights and responsibilities locally, national and global (WEF, 2016).

The specific focus of ESD is to increase knowledge of potential strategies to meet the fourth United Nations Sustainable Development Goal 4 which strives for quality education. The SDGs form part of the United Nations 2030 Agenda for Sustainable Development which was unanimously adopted in 2016 by all UN member states as a plan of action of nations for people, planet and prosperity. In this study it emerged that reaching SDG4 targets is a shared responsibility shared among individuals, education and training institutions, and regulating governments. The study established that higher education institutions and more specifically teacher education institutions and teacher educators are key change agents in reorienting education to address quality and sustainability in educational provision. In this article we specifically, focused on SDG4 which contains specific targets addressing the needs of children, youth and adults. The idea of lifelong learning for all is a key element of SDG4. Evidence from the study and other research from the Western world demonstrate that participation in quality higher education and higher levels of educational attainment correlates with a wide range of indicators concerning attaining SDGs. In this study participants emphasised that participating in education, especially higher education of high quality produces a wide range of indicators concerning good health, well –being, active citizenship and increasing chances of employment. The benefits of participation in high quality education and especially ESD can be both monetary and non-monetary, and occur at individual societal levels. ESD is the engine for socioeconomic development and it creates the necessary foundation in which excellence can flourish where Africa as a continent can embark on the road to develop a knowledge economy. Higher education is crucial to achieving the Education for All and (MDGs). The chapter contributes towards an extensive and institutional well –supported idea in achieving ESD. A fundamental contribution of the chapter is the role of agency in enhancing quality teaching and learning in the higher education context. The chapter identifies aspects of higher education in Zimbabwe that contain or enable the agency of the university educators in their attempts to mainstream ESD in their context of higher education.

V. RECOMMENDATIONS

Having explored the ten SDG4 targets in greater depth and findings from the study and literature review focusing on culture, structure and agency reflecting on the micro meso and micro perspectives a number of overarching recommendations for further consideration and discussions among researchers, policy makers and practitioners can be suggested:

- Education curriculum development institutions, higher education and research organisations should be at the forefront of the search and development of these new forms of teaching and learning.
- Education policies and support mechanisms that allow for more integrated forms of teaching and learning should be strengthened.
- Support for ESD related research is needed to enhance both the quality and the evidence base of ESD.
- Many of the targets may be easier to reach when strong and access equity based infrastructures are made available in education despite education being explicitly mentioned in relation to the outreach in Goal SDG 17. Access and equity to higher education may play a crucial role in reducing these social inequalities.
- Higher education institutions are likely to be more successful if they manage to attract high- qualified

staff and engage in effective and efficient educational management, stay on top of their finances and reach out to local communities to make their educational offers known.

- It is important for educational institutions to diversify their education offerings, including vocational and technical programs. Research conducted by (Boeren, Whittaker & Riddel, 2017) show that countries with low participation rates in adult learning tend to have limited high quality provision available.
- Educational managers need to work with staff in their institutions to focus on inclusion and access, a common theme throughout the SDG4 target.
- More work is inevitably needed to be done in developing countries to offer the highest quality of education.
- Investing in state of the art higher education and training institutions which is a core idea of structural approach in education is needed if SDG4 targets are to be achieved.
- Ensuring sufficient funding and political commitment to invest in higher education is essential and a common theme across all SDG4 targets.
- It is useful for governments to invest in job creation and a health labour market as adults will only receive chances to maintain and utilise their high level skills if the job market provides them with opportunities to do so (SDG 4.4).
- For developing countries in the world, it will also be important to recognise the importance of investing in foreign aid in order to close the economic and social gaps between developed and developing countries. (SDG 4.9 and SDG 4.10).
- Participation in quality higher education is recommended since higher levels of educational attainment correlates with a wide range of indicators concerning good health, wellbeing, active citizenship and employment.
- The implementation and maintenance of high quality higher education systems across the globe is highly recommended.
- Policy management systems should provide guidance, oversight, coordinating, monitoring and evaluation to ensure an effective sustainable, and institutionalised educational response to ESD.
- Higher education should establish policies and strategic plans that are linked towards the transition to achieve quality and sustainability in higher education

In summary, developing countries need to raise awareness of the benefits of learning among citizens and policy makers to put better quality monitoring systems in place and build partnerships with other relevant stakeholders. There is a need to bring higher education training opportunities to the people and also provide high quality teacher training across the world since teacher education is a central focal factor for national development and to produce capable citizenship of high quality. We need to improve the quality of teacher education and develop educational standards that contain local and national issues. The SDGs call for inclusive and accessible education for all, but this might be difficult to attain if teachers are unaware of how to achieve this through their work.

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