

MAINSTREAMING EDUCATION FOR SUSTAINABLE DEVELOPMENT, THE TRANSITION TOWARDS ACHIEVING SUSTAINABLE DEVELOPMENT GOAL 4 ON QUALITY IN HIGHER EDUCATION

*GN SHAVA, K. MANOKORE, E. MHLANGA, M.MPOFU, N. PHUTHI, N. MKWELIE, A. MANGENA

National University of Science and Technology,
Faculty of Science and Technology

ABSTRACT

Over the past 20 years, Education for Sustainable Development (ESD) has become part of the discourse and issue in higher education teaching and learning. Every phase of higher education the world over are now being urged to declare its support for ESD. The United Nations (UN) 2030 Agenda proposes that ESD should play a vital role in the transformation of the world's economy as expressed in the Agenda's goals and sub-goals. Higher education should play a pivotal role in mainstreaming education for sustainable development. The UN Incheon Declaration 2015 significantly highlighted the vital role of education that it plays in the universal journey towards sustainable development across the globe and saving our planet. In September 2015 the UN formally adopted the 17 sustainable development goals (SDGs) as an outcome of a major global consultative process. Agenda 2030 advocates for providing the opportunity to progress towards implementing ESD that fosters the knowledge, skills, values, perspectives, and actions that lead towards a more sustainable future. The study draws on structure and agency approaches to examine the implementation of Agenda 2030 Global Goals to offer deeper insight into the roles individuals and institutions of higher education in Zimbabwe play in implementing the UN sustainable development goals. The aim of the study is to increase knowledge of potential strategies to meet the fourth UN Sustainable Development Goal (SDG4), which strives for quality education. The qualitative study provides a detailed description of the ways in which agency and structure in higher education systems enable or constrain ESD mainstreaming. We demonstrate that a critical realist perspective can contribute towards the understanding and achievement of transformation towards sustainability.

Keywords: Education for sustainable development, higher education, quality education, teaching, and learning, sustainable development goals

1.0 INTRODUCTION

Higher education institutions should undertake strategic collaborations, boost innovation and develop entrepreneurial initiatives, targeting the needs of students to remain relevant in the future. The UN 2030 Agenda proposed that Education for ESD should play a vital role in the transformation of the world's economy as expressed in the agenda's goals and sub-goals. Higher education should play a pivotal role in mainstreaming education for sustainable

development. Education is a human right and a force for sustainable development and peace. Every goal in the 2030 agenda requires education to empower people with the knowledge, skills, and values to live in dignity, build their lives and contribute to their societies. On 25 September 2015, the UN General Assembly adopted the 2030 Agenda for Sustainable Development (UN 2015). The UN luncheon Declaration 2015 significantly highlighted the pivotal role that education plays in the universal journey towards addressing sustainable development goals across the globe and serving nations. Agenda 2030 goal 4 advocates for providing the opportunity to progress towards implementing quality education for sustainable development that fosters the knowledge skills, values, perspectives and actions that lead towards a more sustainable future. Ambitions for education are essentially captured in Sustainable Development Goal 4 (SDG 4) of the 2030 Agenda which aims to **“ensure inclusive and equitable quality education and promote lifelong learning opportunities for all by 2030”**. The roadmap to achieve the education goal, adopted in September 2015, provides guidance to governments and partners on how to turn commitments into action Education 2030 Framework for Action (Shava, 2020).

Higher education institutions are essential in the achievement of SDGs because they equip the next generation with skills, knowledge, and understanding to address sustainability challenges and opportunities and perform research that advances sustainable agenda. Agenda 2030 for sustainable development seeks to shape global development policies and actions for the next 15 years, ensuring momentum and strategic direction for global quality higher education and concerted action to kickstart the improvement of quality in teaching and learning. The UN (Dash and Mohanty 2018) Decade of Education for Sustainable Development (UNDESD) (2005-2014) significantly highlighted the vital role that education plays in the universal journey towards sustainable development. The need to embed ESD in higher education curriculum and pedagogy is well recognized in international sustainable development dialogues (Tilbury and Ryan, 2013). Learning to change for a better world is the catchphrase most often associated with the term ESD. Underpinning this education movement is a commitment to rethink the purpose of education and to reorient curriculum and pedagogy framework practices. ESD seeks to shift education paradigms and extend learning opportunities so that people can contribute to more sustainable futures (Tilbury, 2010). In this article, we argue that good quality education is an essential tool for achieving more sustainable development. The major strategies for achieving ESD in higher education through this experience with critical thinking, provocative questioning, and alternative ideas about current patterns of development and potential to devise new ways of living. Changing higher education curriculum and pedagogy is recognized to be one of the most intractable, difficult, and complex areas of ESD (Guni, 2011). With the adoption of the UN SDGs in 2015 ESD is now undoubtedly at the very top of the global agenda (WEF, 2016). UN Agenda 2030 seeks to transform the world focusing on orienting higher education towards sustainable development with a strong suggestion to review curriculum to ensure multi-disciplinary approaches. ESD is referred to in other SDGs and can safely be argued that ESD cuts across all the 17 SDGs and can indeed be seen as a key instrument to achieve the SDGs (UNESCO 2017). The 2030 Agenda and its enshrined goals, enhancing the economic, social, and environmental perspectives of sustainable development provide a holistic and promising opportunity for the wellbeing of the world’s future generations and the planet.

This article, therefore, explores the implementation of the UN 2030 Agenda on ESD specific targets within the fourth UN Sustainable Development Goal (SDG4) on quality education (WEF 2016) elaborating the role of structure and agency in the Zimbabwean context of higher education. The article seeks to elaborate the role of structure and agency approaches (Giddens 1984, Bourdieu 1984) to offer deeper insight into roles that individual and institutional structures play in achieving the specific education targets by 2030. The qualitative study therefore conducted in four higher learning institutions provides a detailed description of the ways in which agency and structure in higher education systems enable or constrain ESD mainstreaming.

This article has four major sections. It opens with a brief overview of the UN Sustainable Development Goals giving the evolution of ESD in international policies and in relation to higher education. This is followed by a separate section on structure and agency approaches underlining their contribution to the implementation of Agenda 2030 global goals. A brief presentation of the methodology is provided to show how data was gathered. The main substantive section of the article presents the findings pertaining to the implementation of the UN 2030 agenda and practices of ESD in the Zimbabwean higher education context. Summaries, conclusions, and discussions of the main findings are also provided.

2.0 LITERATURE REVIEW: Implementing Education for Sustainable Development

While higher education is broadly understood as it plays an important role in the acquisition, dissemination, and application of knowledge it is not equally perceived, to contribute to values and ethics and to take the lead in the implementation of the UN 2030 Agenda for sustainable development or to a more sustainable society.

At the end of the United Nations Decade of Education for Sustainable Development (UNDESD) 2005-2014 and the beginning of the United Nations Educational Scientific and Cultural Organization (UNESCO), Global Action Program (GAP) on Education and many nations are poised to scale up ESD implementation (UNESCO 2014). Education for sustainable development empowers learners to make informed decisions and responsible action for environmental integrity, economic viability and just society for present and future generations while respecting cultural diversity. Higher education is a catalyst for sustainability progress in academic and practical innovation. It is about lifelong learning and is an integral part of quality education (Madsen 2013). In spite of the widespread implementation and success of ESD, the expansion of ESD in higher education would require the ESD community to provide evidence that ESD is effective and contributes to the overall quality of teaching and learning. ESD is referred to in other SDGs and it could be argued that ESD cuts across all the 17 SDGs and are seen as a key instrument to achieve the SDGs (UNESCO 2017). In order to scale up ESD work globally in the context of the SDGs, UNESCO which is the lead agency for ESD launched several declarations among which are:

- World Conference on ESD in Aichi-Nagoya Japan.
- UN Decade of ESD (2005-2014)
- The 2030 Incheon Declaration sets out a new vision for education for the next fifteen years.

All these were particularly meant to promote ESD actions in areas such as:

- Policy, education institutions
- Young and local communities.

This is an indication that the SDGs and in particular the ESD are not the first set of goals designed to help nations work together to create a more sustainable global society. UNESCO (2014) tells us that ESD is generally understood as education that empowers learners to make informed decisions and responsible actions for environmental integrity, economic viability, and just society, for present and future generations, respecting cultural diversity. It is about lifelong learning and is an integral part of quality education. ESD is holistic and transformational education that addresses, learning content and outcomes, pedagogy, and the learning environment. It achieves its purpose by transforming society. The widely accepted definition of sustainable development is a development that meets (UNESCO 2014) the need of the present without compromising the ability of future generations to meet their own needs.

In September 2015 at the initiation of the Director-General of UNESCO, UNICEF, the World Bank, UN on this holistic occasion reaffirmed the vision of the world movement for Education for all initiated in Jomtien in 1990 and reiterated in Dakar in 2000 the most important commitment to education in recent decades and which has helped drive significant progress in education (WEF, 2016). The 2030 vision for education is to transform lives through education, recognizing the important role of education as a driver of development and in achieving the other proposed SDGs. In the 2030 Global Agenda Nations committed with a sense of urgency to a single, renewed education agenda that is holistic, ambitious and aspirational, leaving no one behind. The vision is fully captured by the proposed SDG4 "Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. According to WEF (2016), the vision of 2030 is to improve quality education and improve learning outcomes, which requires strengthening inputs, processes, and evaluation of outcomes and mechanisms to measure progress. Quality education fosters creativity and knowledge and ensures the acquisition of the foundational skills of literacy and numeracy as well as analytical problem solving and high-level cognitive, interpersonal and social skills. It also develops the skills, values, and attitudes that enable citizens to lead healthy and fulfilled lives, make informed decisions, and respond to local and global challenges through education for sustainable development and global citizenship education. Boereen (2019) tells us that the success of the 2030 agenda requires sound policies and planning as well as efficient implementation arrangements. It is also clear that the aspirations encompassed in the proposed SDG4 cannot be realized without a significant and well-targeted increase in financing, particularly in those countries further away from achieving quality education.

There is a need to increase public spending on higher education in accordance with the country's context. The 2030 global agenda called on the WEF 2016 co-conveners including UNESCO to individually and collectively support countries in implementing the 2030 agenda, by providing technical advice, national capacity development, and financial support based on their respective mandates and comparative advantages and building on complementary. The 2030 Incheon Declaration seeks to build on the legacy of Jomtien and Dakar in its holistic commitment by all nations to transform lives through a new vision for education, with bold and innovative actions, to reach the ambitious goal by 2030 (WEF

2016). Historically Zimbabwe higher education made remarkable progress in education since 2000 when the six education for all (EFA) goals and the Millennium Development Goals (MDGs) were established. While the goal of widening and deepening access to education was achieved, the goal of quality higher education was not reached by the 2015 deadline and continued action in Zimbabwe is needed to complete the unfinished agenda. With Goal 4 on Transforming our World, the 2030 Agenda for sustainable development, the world has set a more ambitious universal education agenda for the period from 2015 to 2030 and every effort is made to guarantee that the goal of achieving quality and sustainability is achieved. The Incheon Declaration constitutes the commitment of the education community to Education 2030 and the 2030 Agenda for Sustainable Development recognizing the important role of education as a main driver of development. Quality education is at the heart of the 2030 Agenda for sustainable development and essential for the success of all SDGs (WEF, 2015).

Building on and continuing the EFA movement, Agenda 2030 takes into account lessons learned since 2000. What is new about Agenda 2030 is its focus on increased and expanded access, inclusion and equity, quality, and lifelong approach. This suggests that quality education can also include increasing skills in relation to learning for sustainability. The SDG4 recommends quality education for all which has deep roots in many international declarations. The sustainable development goal on education for 2030 targets to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all, based on four focused areas:

- Expanded access to quality learning for all across the various levels of education.
- Attention to the quality of education including content, relevance, and learning outcomes across the disciplines.
- Greater focus on equity of access and resources of education.
- Gender equality across all levels of education with a safe and supportive learning environment (Mohaty and Dash, 2018).

To achieve these goals, higher education institutions need to develop a new culture of the educational process, which implies:

- Achieving a holistic interdisciplinary approach and thinking.
- Organizing mixed capacity building mixed training groups.
- Provide new frictions and roles of main actors.
- Modifying the organization of educational institutions.
- Widely applying innovative educational technologies and training methods. (Palmer, 2015; UN 2015; UNESCO, 2017A).

Innovative methods of education provide students both with new professional knowledge and skills and an opportunity to active participation and raise the awareness of sustainability. The overall goal of ESD, DESD, and UN Agenda 2030 is to integrate the principles, values, and practices of sustainable development into all aspects of higher education teaching and learning. The educational effort will encourage changes in behavior that will create a more sustainable future in terms of creating better quality living standards through quality education resulting in creating a just society for present and future generations. The overall goal of the UN Agenda 2030 is to integrate the values inherent in sustainable development into all aspects of learning to encourage changes in behavior that allow for a more sustainable

and just society for all. The primary goals of ESD and the UN 2030 Agenda for sustainable development are laid out in the UN General Assembly resolutions which seek to encourage governments to consider the inclusion of measures to implement the 2030 Global Agenda in their respective higher education systems and strategies and where appropriate national plans (UN, 2015). The key objectives of both the DESD and the UN 2030 Agenda are:

- Facilitate networking linkages, exchange, and interaction among stakeholders on ESD and SDGs.
- Foster increased quality of teaching and learning in education for sustainable development to transform the world the 2030 global agenda.
- Help countries make progress towards achieving Agenda 2030 global goals and also attain millennium development goals through ESD efforts.
- Provide countries with new opportunities to incorporate ESD into education reform efforts (Boeren, 2019; UN 2015; UNESCO, 2017).

The major thrust of DESD and UN Agenda 2030 for sustainable development are:

- Improving access to quality education at all levels.
- Reorienting existing education programs and systems to incorporate ESD.
- Developing public awareness on ESD.
- Providing training and capacity building on ESD.
- Research and innovation.
- Use of ICT Information Communication Technology (ICT).
- Partnership and networking.
- Vision building and advocacy (UNESCO, 2017).

The main challenges of ESD are:

- To integrate sustainable science, ICT, and education.
- To strengthen coordination and collaboration between different levels of education for sustainable development.
- How to implement ESD within and outside the institution.
- How can higher learning institutions overcome new challenges and expectations of 21st-century teaching and learning?
- How should institutions transfer knowledge to society and at the same time implement ESD?

More recently, (UNESCO, 2018) advocates for ESD to play an active role across the globe to empower all learners to make informed decisions and responsible actions for environmental integrity, economic viability, and just society for present and future generations. The 2030 vision is to transform lives through education and higher education is taking the initiative to lead in the implementation of the UN2030 Agenda for sustainable development. This, therefore, calls for major reforms in higher education systems to promote holistic and transformational education that would address learning content and outcomes, innovative pedagogy, and learning by doing and using a whole institutional approach to engage stakeholders in achieving sustainable change (Mohanty and Dash, 2018). Currently, UNESCO is the lead agency as recognized by the UN General Assembly Resolution 70/209 in 2015 which recommends the 2030 Sustainable Development Agenda and acts as the key

enabler for all the 17SDGs including SDG4 on quality education aiming towards how to live and work sustainably.

Education for sustainable development is not a novel concept for the Zimbabwean context of higher education, considering the wide diffusion of experiences at different conferences held in Africa and the Nordic Countries. While it is broadly understood that Zimbabwean Universities play an important role in the acquisition, dissemination and application of knowledge and take a lead in the transition to a more sustainable society, multiple challenges are faced emanating from institutional and agential conditions. Zimbabwe higher education institutions are facing different challenges towards achieving sustainable higher education. To be successful, ESD requires an interdisciplinary approach and field of communication, practical interaction, and implementation of joint initiatives and projects in various fields involved in elaborating and teaching various ESD aspects. There is a need for a new curriculum and philosophy of development, based on the concept of ESD, which is considered essential for all higher education learners.

3.0 THEORETICAL FRAMEWORK: Structure and agency.

The theoretical viewpoint of the study resonates with the thoughts of Margret Archer's (1995:1996) social realist theory of structure and agency to get an insight into the implementation of the UN2030 Agenda for sustainable development in the Zimbabwean higher education context. The critical realist theory suggests that agency emerges from the structure which has material transactions with social interactions between humans, and social structures. 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. Archer (2003) believes that there is a reality independent of our thinking that science can study. Social realist theory analyses social practices with the aim of promoting positive change and transformation (Bhasker 1998,1979, 1989,2010,2011). Critical and social realists (Archer 2003) focus on identifying hidden causal mechanisms that hinder the implementation of a given program. Critical realism observes that there is a reality that exists independent of human conception. The realism aspect of the theory focuses on the existence of real mechanisms which shape events while critical aspects require a deep understanding of any social situation, going beyond the observable and investigating the mechanisms behind any event. Critical realist theory, according to Archer (1995) accepts that there exists a reality independent of people's interpretation of it but acknowledges that their knowledge of reality is subject to all kinds of historical and other influences. Critical realists believe that empirical knowledge can further be explored to uncover or unveil what is responsible for people's experiences and observations of the world. Critical realist research, therefore, aims at arriving at knowledge of the content of the causal process (Bhasker, 2011).

3.1 Structure

Archer (1995:1996) views structure as the forms of social organization as well as the social relations that comprise them. Zimbabwe higher education is likely to face severe structural impediments to sustainable development. The structure includes social institutions, infrastructure, social practices, roles, policies, and organizational subcommittees and structures. Structures are seen as relations among social positions and are ontologically prior to and independent from the people operating within them. Giddens (1979) tells us that

structures are what give form and shape to social life. Structures may relate to material resources and to the recurring pattern of social behavior or to the interrelationship between different elements of society around the distribution of those material resources (Madzielwana and Maphosa 2013). Archer (1995:1996) identifies three important characteristics that have to be considered when analyzing structure, these are autonomy, anterior and causal influence, and they motivate action. For Archer (2003) structures are real but they require the activity of agents to be reproduced or changed. Structures exert a causal influence on people's actions. According to Archer (2003) when analyzing structure, one can either focus on positional levels, roles, or institutional structures like ICT.

3.2 Agency

Agency is defined by Archer (1995:1996) as the reflective, creative, innovative, and purposeful actions of people. Agency refers to the personal and psychological make-up of individuals, their social roles, and relates to their capacity to act in a voluntary way. Agents continuously monitor their own thoughts and activities as well as their physical and social contexts. Giddens (1984) argues that people are not passive beings whose actions are automatically triggered by the forces of the structures in an organization. Although structural and cultural systems impose constraints on the actions of people (agents) it is important to understand that people are reflexive actors. As actors, people choose what they like or dislike. The actions of people therefore can be significantly different from the socio-cultural systems imposed upon them, not only because of discrepancies between imposed ideas held by individual actors but also because people think and make their own decisions about situations confronting them. People have their own emergent powers which cannot be reduced to those of structure and culture. The success of the UN2030 Agenda may to a great extent depend on the agential powers of people to reinforce or transform higher education teaching and learning. Referring to the interplay of structure and agency in this study we argue that social structures are the outcome of past social interactions between agency and structures which condition the content in which current agents find them. Structures and agents are brought together as dialectically related, none exists without the other.

3.3 Study Design and Methods

This study employed a qualitative research approach with an interpretive epistemological and constructivist ontological perspective. As a research methodology, the qualitative research method infuses an added advantage to the exploratory capacity that researchers need to explore and investigate their research studies. By adopting the qualitative study, the researchers assumed that social phenomena and their meaning are subject to the influence of social actors, they are produced and constantly changed by social interaction (Creswell, 2012, 2013; Flick, 2010). As an approach that is participant-oriented, the interpretive phenomenological analysis approach allows the interviewees to express themselves and their lived experiences and stories the way they see fit without distortions. Through the intensive interactions, the researchers tried to grasp the subjective meaning of social action in the study. To gather a breadth of contextual information, we used multiple cases of four higher education institutions in Zimbabwe. The institutions are all state-funded. Two institutions are universities and the other two are colleges. As qualitative researchers, we sought the lived

experiences of research participants drawn from institutional academics. We allowed them to narrate their experiences in implementing the UN2030 Global Goals in their institutions.

3.4 Data Collection

The strong desire to collect data that reflect the perspectives of the research participants resulted in the choice of in-depth, semi-structured interviews with participants. Common questions were used to solicit participants' views on the implementation of the UN2030 Global Agenda on ESD in their respective higher learning institutions. The study questions were broad and open-ended to capture the breadth of the implementation of the 2030 Global Agenda. The focus was on the provision of quality teaching and learning which are key to sustainable development. Creswell (2013) tells us that interviews present the researcher with the means to obtain the participant's experiences, knowledge, thoughts, and feelings. A purposeful sampling technique for information-rich cases was used to select the four institutions and participants.

In seeking trustworthiness, the researcher should be concerned with the activities that increase the probability that credible findings will be produced (Guba 1985). In this study, the following steps were taken to promote confidence that the researchers accurately recoded the phenomenon under investigation. We made contacts with participants through their emails well before the study and took descriptive field notes using voice recorders detailing all the information from participants. According to Alase (2016) qualitative researchers should follow steps to increase trustworthiness and credibility so that results are not cured or defective; trustworthiness, member-checks, triangulation, auditing, and prolonged engagement as tools for investigating any phenomenological data gathering and analysis. One major strategy that was adopted to ensure credibility in the study was through prolonged engagement which was the investment of sufficient time with participants to achieve the study objectives. In all cases, 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.

The study focused on the implementation of the UN2030 Agenda focusing on higher education teaching and learning.

3.5 Interview questions

Six common questions were used to solicit participants' views and these were:

- What is the level of commitment in the institutions to implement Agenda 2030 global goals?
- What obstacles are encountered in an effort to implement Agenda 2030 on quality higher education?
- What ESD pedagogies are adopted to shift teaching away from traditional pedagogical approaches to designing opportunities in which students are stimulated to ask questions, analyze, think critically and make decisions?
- What institutional challenges are faced in the implementation of UN2030 Global Goals on education for sustainable development?

- How are higher education institutions in Zimbabwe sufficiently resourced to implement ESD?
- What suggestions do you have to enhance the implementation of the UN2030 global agenda on quality higher education?

5.0 DATA ANALYSIS

Grounded on the accounts of the study participants, this descriptive narrative highlights the key findings of the study. In this section of the study, we present the findings of the study on the implementation of Agenda 2030 Global Goals on ESD specifically focusing on the role of structures and agency in the Zimbabwean context of higher education. The key objective of the study was to understand aspects of higher education that constrain or enable the agency of the institutions in their attempts to implement UN Agenda 2030 Global Goals on ESD. We approached this objective using the critical realist theory of structure and agency which Bhaskar, Denmark, and Price(2018) attempted to provide an inter-disciplinary dialectic model for explaining the social activity. Our argument is structured according to the six common interview questions that were asked to study participants in each case study. Data from the study revealed that due to a more pragmatic approach and the intervention of UNESCO in higher education which requires far-reaching changes in the way higher education is delivered, it emerged that some institutions in Zimbabwe have gone to some lengths to walk the talk when it comes to the implementation of ESD concepts and teaching strategies. In some cases, some universities or faculties have dedicated themselves to teaching and learning along with ESD principles and greening their campuses, eg the National University of Science and Technology (NUST) through its implementation of Education 5.0 with its pillars of:

- Teaching
- Research
- University Service
- Community service
- Innovation and Industrialisation

NUST is also actively involved in the Sustainability Starts with Teachers a capacity building program for Teacher Educators on ESD which is implemented in partnership with the UNESCO Regional Office for Southern Africa, Rhodes University, the Southern African Regional Universities Association(SARUA), and the Swedish International Centre of Education for Sustainable Development(SWEDESD). The program is a regional program that falls within UNESCO's Education for Sustainable Development: Towards achieving the SDGs or ESD for 2030. Great Zimbabwe University University (GZU) has also embarked on its rural outreach programs in the Masvingo region. A specific historical context has resulted in very different ways of teaching and learning as opposed to the historical methods of teaching. However, participants in this study highlighted that higher education institutions in Zimbabwe are faced with multiple challenges associated with the implementation of Agenda 2030 Global Goals due to issues like the transformation to a market economy, the growing numbers of students, and deep systematic resistance to change among academics. The implementation of Agenda 2030 UN Global Goals has faced obstacles especially emanating from structural and agential conditions in the higher education system. Despite some

converging processes, initiatives by UNESCO, events, discourses, and declarations where Zimbabwe has been a signatory, the adoption of ESD and the implementation of Agenda 2030 Global Goals has faced multiple obstacles. Participants of the study highlighted that higher education plays a crucial role in relation to the achievement of SDGs and acknowledging the vital role quality and inclusive education play in enhancing the achievement of Agenda 2030 Global Goals. The last few years have witnessed a gradual shift in the conceptualization of ESD in higher education with the concept presented as a principle or strategy in all tertiary and higher education institutions. Findings from the study pointed out that the implementation of UN 2030 Global Goals in Zimbabwe higher education is not a simple undertaking due to the absence of a strategic policy framework and there is no road map to prescribe how the mainstreaming should be adopted.

The commitment of higher education agencies and institutional structures to implement Agenda 2030 Global Goals.

On this aspect, we looked at what specifically constrain the agents in higher education in an effort to promote the implementation of Agenda 2030 Global Goals at the policy and individual institutional levels. While there is an emphasis on ESD and achieving Agenda 2030 Global Goals, in Zimbabwean higher education, and there are several programs to oversee the implementation of Agenda 2030, the actual concept of ESD is still not fully understood. Findings from the study showed that higher education institutions have failed to provide concrete and measurable goals for adopting policies and producers at all levels of education including higher education institutions that should provide leadership throughout the whole education system and which are specifically important for teacher education. On the other hand, participants argued that higher education personnel are not easily influenced by policies that originate outside academia. While higher education institutions have the responsibility to make a greater impact on academic practices towards the implementation of Agenda 2030 higher learning institutions have shown a negative attitude towards implementing ESD. To ensure the implementation of Agenda 2030 in Zimbabwe higher education needs to put mechanisms of potential ESD-oriented transitions, the historical tradition and culture of higher education have to be renewed. In Zimbabwe higher education context, student enrollment has increased and more interest in the humanities has expanded, especially in programs such as Media Studies and Journalism, Records and Achieves, Economics, Languages, and Law which is accompanied by a significant decline in interest in Technical, Sciences, Engineering, Technology and Applied Sciences. In summary, participants highlighted the following as key constraints for achieving Agenda 2030 Global Goals:

- Strong bottom-up approaches coming from enthusiasts that lack clear support from leadership and senior academics
- University budget restrictions and lack of qualified staff.
- Lack of encouraging policy environment and lack of coordination and interdisciplinary work. The latter obstacle is capital importance and the 2030 Agenda has also put the spotlight on the need to break silos and work across disciplines and faculties

- Leadership convinced of the need to embed sustainable development but finding it difficult to reach academics, service staff, and students and make cultural change possible.
- Most participants considered “funding” to be the most critical burden.
- Lack of institutional support and lack of awareness and concern about the quality and ESD (GZU, NUST).
- The rapid quantitative growth in student numbers triggered concerns for quality and overburdening academic staff (HILLSIDE, JMN, GZU).
- Trends towards massification produces contradictions and dilemmas
- The pressure of massification and its attainment problems mean that academics have increasingly demanding roles to improve the quality of teaching (GZU).
- Massification and the numbers game have induced problems relating to the decline in quality education (GZU, HILLSIDE).

Quotes from participants

The marriage between the massification of higher education and quality teaching has not always been easy and achievable (GZU).

The speed with which expansion has occurred in Zimbabwe higher education is seen as intoxicating (GZU).

Massification in higher education to achieving quality and Agenda 2030 Global Goals (GZU).

Higher education systems are facing challenges of systematic transition towards achieving Agenda 2030 (GZU, NUST).

There is a serious struggle with growing numbers of students, lack of financial resources necessary to increase system capacity (GZU, NUST, JMN).

It emerged from participants that all the four institutions have initiatives and are making efforts towards the transition to achieve Agenda 2030 Global Goals but in all cases there are agential and institutional specific factors related to ESD implementation to take off. Such factors include the lack of individual institutional policy or strategy that is closely monitored. Lack of institutionally coordinated efforts by top management that incorporated all faculties in the bid to ensure the implementation of Agenda 2030 Global Goals. In all institutions, there is a lack of awareness among academics about ESD and more so SGs or Agenda 2030 Global Goals across disciplines, and there is a lack of adequate value for the essence of Agenda 2030 Global Goals, which were found to constrain the agency of actors for ESD implementation at the institutional level.

The financial support from all institutions' administration for implementing Agenda 2030 was lacking, hampering the progress of SDGs implementation. According to the findings across all institutions covered in this Zimbabwean case, the contribution of the higher education ministry was not adequate. Although Zimbabwe has UNESCO-funded programs for higher education on change projects and ESD programs, which have an enabling effect on ESD implementation activities, the institutional strategies and policies influenced the

implementation of Agenda 2030 Global Goals. In Zimbabwe, the contribution of the Ministry of Higher and Tertiary Education was not adequate in terms of supporting the engagement for implementing Agenda 2030 Global Goals. Our study findings are further divided into four sub-cases based on the four institutions covered in the study. These are presented below;

Case 1. The National University of Science and Technology (NUST) is one of the leading providers of quality Science and Technology education. Its mandate is to provide Science and Technology education, providing training research and consultancy services in Zimbabwe and the Southern African region. In this study it became apparent that little attention was done to implementing Agenda 2030 Global issues, only the faculty of Science and Technology Education was implementing some change project programs since it was responsible for training teachers for Science, Technology, Design, and Engineering education. It was apparent that little attention was given to ESD issues. Evidence for these structural and agential included the absence of ESD-related courses and concepts at the university. Furthermore, the implementation of Agenda 2030 was constrained by the lack of ESD policy or strategy for achieving quality teaching and learning. This resulted in a lack of institutionally coordinated activities to address ESD issues. There was little awareness of ESD programs in the university. The difficulty to a great extent hampered the emergency of individual agencies directed towards implementing Agenda 2030 Global Goals. The university has established a unit for institutional research and quality management headed by a director to ensure the implementation of ESD principles in the university.

Case 2. At Great Zimbabwe University (GZU), there are active ESD agents and activities through their outreach programs in education and agriculture, and garment construction. The faculty of education participates in outreach programs in primary and secondary schools. Besides these visible activities at GZU, other deeper and more qualitative transformations were reported, these included pedagogical and teaching approaches that stressed participatory learning by doing and management that is spread across educational systems which provided synergies through ESD across communities and other institutions within their geographical location. At the GZU study participants argued that the sustainability oriented leadership in higher education that should be developed requires systematic thinking and transdisciplinary skills with a deep understanding of ESD. Interestingly, the introduction of ESD into educational operational policy and higher education curriculum and management are hard to come by. This is partly exemplified by the glaring absence of policies and strategies that are linked towards the transition to achieve Agenda 2030 Global Goals. Evidence on the structural and agential influences included the absence of ESD courses and practices in the university. There is no evidence of institutional coordinated activities specifically linked towards addressing sustainability issues and among most agencies, there is little awareness about ESD. The university does not have favorable structures to facilitate the implementation of Agenda 2030 Global Goals. The university administration is still located at Masvingo Teachers college. There are several university sites scattered in the town of Masvingo. Apart from the lack of structural and institutional ESD policy, strategy or framework and coordinated efforts in the institution, study participants raised issues of:

- Lack of infrastructure for Science and Engineering courses in the institution
- Lack of commitment among members of staff
- Traditional practices and hierarchy of senior academics

- Lack of funding to support ESD initiatives
- Lack of awareness about ESD
- Absence of institutional ESD policy or strategy at the university.
- Lack of integrating SDGs in the curriculum

The total lack of institutional strategy and awareness of ESD and more so Agenda 2030 Global Goals constrained the agency to effectively implement initiatives linked towards the transition to achieve Agenda 2030 Global Goals. The study findings indicated that sustainability-oriented changes in higher education may be developed through top-down as well as bottom-up approaches. The top-down approach provided direction in the management and governance of academic institutions and the effective implementation of Agenda 2030 Global Goals was lacking at most institutions.

Case 3. Joshua MqabukoNkomo (JMN), by most measures, the State-funded Polytechnic lag behind the development as compared to other colleges. Prominent success stories in the implementation of ESD into educational operational policy are hard to come by in the institution. There is a glaring absence of ESD body and policy requiring the institution's participation towards achieving Agenda 2030 Global Goals. Lack of funding, poor awareness of the ESD concepts were said to be potential challenges of implementing ESD. The lack of awareness about ESD across disciplines and lack of adequate value for the essence of ESD were found to constrain the implementation of Agenda 2030 Global Goals. In a similar vein, unfavorable structures at JMN and the negative attitudes towards implementing innovations among the academic community, and the appearance of an institution that is environmentally unsuitable constrained the achievement of the UN 2030 Global Goals on ESD. The key barriers to implementing Agenda 2030 Global Goals at JMN included:

- Methodological barriers and spiritual beliefs of the church-run university
- Financial constraints to sustain ESD principles
- Institutional beliefs and resistance to change
- In terms of teaching and training, ESD does not greatly figure and even environmental education is only offered on an optional basis at some pedagogical departments
- There is no interdisciplinary education and ESD competences
- institutional structures remain highly inflexible and unwilling to accept new ideas in teaching and learning especially those which involve critical thinking and problem solving
- Institutional staff lack the requisite skills and competencies to implement esd
- There is negligible efforts of ESD implementation
- Little if any buy-in of ESD at lower and higher levels of institutional management.
- Management has little knowledge of ESD principles.

Findings from the study indicate that at JMN the lack of commitment and financial support on the part of top management has meant little progress has been made towards implementing ESD. There is very little in the way of an interdisciplinary approach to offer a green campus.

Case 4. At Hillside Teachers' college, a previously white teachers' college established during the colonial era, was specifically meant for training White Secondary school teachers. The college has the best infrastructure to effectively implement ESD. Apart from the lack of

institutional ESD policy and strategy or framework and coordinated efforts in the institution, participants raised challenges relating to the traditional practice and hierarchy of senior academics, disciplinary discrimination, and apportionment of ESD responsibilities and expertise in certain disciplines or departments. Participants in Sciences argued that since education appears in the concept of education for sustainable development, the mandate of ESD should be left to departments that have a strong bias towards teaching and learning which have courses on education teaching and learning and cannot be the concern of other departments such as the Natural Sciences and Agriculture. The misunderstanding or misconception of what ESD really means among senior academics was common among all participants in this study and significantly inhibited the flourishing of ESD at Hillside Teachers college. At the institution, effective implementation of ESD has also been constrained by institutional hierarchical approaches to curriculum and course development. In most cases, if those proposing the adoption of ESD were not senior academics, the whole idea was not supported by top management, and this constituted a source of constraint for the agency of others interested in ESD implementation. hillside Teachers college, it appears that the inclusion of ESD in teaching and learning concepts was not clearly understood by academics. The only academics who understood the principles of ESD were only a few who participated in the Sustainability Starts with Teachers program initiated by UNESCO. Enhancing interdependencies, a better understanding of the context and values of ESD to fully integrate sustainability in both policy and practice have not been attempted. Despite the plethora of initiatives and recommendations, the institution has not made efforts to integrate ESD into teaching and learning. Participants indicated that the institution faces numerous challenges towards implementing ESD into policy, curriculum, and practice. The institution is failing to embed the objectives of sustainability in the planning framework for the institution as a whole. Academics in the college claimed that they do not fully understand the true nature of ESD and it is still considered an innovative idea in the institution and has not yet permeated all departments, academics, and senior management. Evidence from our interviews indicated that Hillside Teachers college does not have a strong commitment to implement ESD policy, curriculum, and practice in alignment with the Global Agenda for 2030. Participants indicated that the implementation of ESD resulted in increased workloads and burnout on the part of academics. One of the participants remarked that ESD implementation results in us being stretched too thin and we need funding to expand staff capacity. A major issue reported both in theory and practice in the achievement of sustainable development Goal 4 for instance, concerns students' involvement and lack of understanding and practice of overall sustainability. The lack of research on sustainability uptake in broader disciplines and limited training designed to facilitate sustainability integration into the curriculum and scarce content or time for ESD are major barriers faced by academics in the institution. Dissemination and implementation of ESD frameworks at Hillside Teachers college have been slow and sporadic. Interestingly, at all universities covered in this study, results show that there is limited implementation of ESD. The concept of ESD has barely taken root in institutions. Education frameworks, policies, and strategies do not cooperate with the concept of ESD at all, there has been no systematic approach in spite of the calling and promotion of ESD in higher education.

Suggestions to enhance the implementation of ESD in higher education

ESD is a complex and evolving subject. How it is applied and implemented is a challenge for Zimbabwe higher education institutions. Study participants suggested the following initiatives to enhance the implementation of ESD:

- Involving the integration of ESD into a multitude of different learning situations
- Organisations, local communities, and individuals to be actors within the movement for sustainable development
- Learning from each other through networking and partnerships
- Sharing experiences and views with stakeholders
- Different stakeholders coming together for joint decisions
- Collection of best practices will assist higher education institutions in their effort to implement ESD
- Raising the awareness of ESD among academics
- Ministerial collaborations to facilitate ESD implementation
- Adoption of learner-oriented courses and use of active teaching methods
- Capacity development for all stakeholders.
- Starting a benchmarking and nationwide learning processes among higher education institutions
- ESD developed largely from environmental education, which seeks to develop knowledge, skills, values, attitudes, and behaviors in people to care for their environment
- ESD to be embedded in the curriculum in an interdisciplinary and holistic manner, allowing for a whole institution approach to policymaking
- Sharing the values and principles that underpin sustainable development
- Promoting critical thinking, problem-solving, and action, all of which develop confidence in addressing the challenges to sustainable development
- Employing a variety of educational methods such as literature, art, drama, and debate to illustrate processes
- Allow learners to participate in decision making on the design and content of education programs
- Looking for the future, ensuring that the content has a long term perspective
- Teaching to focus on educational principles and bringing dimensions of sustainable development

6.0 CONCLUSION

Across Zimbabwe, expanding the implementation of ESD in higher education and the task of expanding the strategic reach of sustainability initiatives and the potential impact and direction that higher education institutions can contribute through their structures and agency is significantly facing challenges. Sustainability brings agency to the question of how higher education can improve the speed and focus of its work with stakeholders and across disciplines, to reconcile academic and practical considerations, deal with plural values and interests, and adapt its structures accordingly. This article has used the structure and agency critical realist perspective to structure an analysis of how higher education structures and agency constrain and enable the implementation of Agenda 2030 Global Goals using four higher education institutions in Zimbabwe. The data for the analysis was obtained from four institutions namely, the National University of Science and Technology, Great Zimbabwe

University, Joshua MqabukoNkomo, and Hillside Teachers college. Research findings established that the implementation of Agenda 2030 Global Goals was constrained by among other issues:

- Lack of awareness about ESD among academics
- Luck of funding to support ESD initiatives
- The absence of institutional strategy and policy among higher education institutions
- The concept of ESD is not fully understood by both academics and university management
- The lack of encouraging policy environment and poor coordination and monitoring of ESD initiatives.

ESD demands more than simply a technical policy transfer and it is also important to ensure that institutional structures and agencies are committed to implementing ESD initiatives across faculties. The support mechanisms necessary for implementing Agenda 2030 Global Goals are weak or totally missing in higher education institutions in Zimbabwe. Higher education top management and governance structures are rather sclerotic and immune to innovation, with political support rather not forthcoming and hence the financing required to set up new transdisciplinary arrangements is lacking and there are no ground level voices and structures for greater interdisciplinary sustainability studies to be heard. Findings from the study showed that the implementation of Agenda 2030 is possible but it is most likely to be successful when there is a confluence of structural and agential factors enabling its implementation in higher education institutions. We, therefore, argue that the implementation of Agenda 2030 Global Goals in higher education needs strong support and commitment from both institutional senior management, academic stakeholders, and the entire policymakers.

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