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Transforming Curricula in Higher Education: Description of Two Perspectives From the Global South and the Global North

Nomalanga Mpofu-Hamadziripi[1], Franz Rauch[2] and Mira Dulle[2]*

[1] Teaching and Learning Institute, Marondera University of Agricultural Sciences and Technology, Marondera, Zimbabwe,
[2] Institute of Instructional and School Development, University of Klagenfurt, Klagenfurt, Austria

The paper is part of the broader narrative of transforming curricula in universities in Zimbabwe and Austria. The landscape in higher education globally is inexorably shifting as a result of major global forces of change. For that reason, higher education cannot remain immune to these global challenges and changes. Rather, universities should be the agents of change. Higher education in Austria and Zimbabwe, in response to these global challenges and imperatives, has begun the process of transforming curricula to educate graduates for the future. The paper explores the strategies that universities in Zimbabwe and Austria have initiated to be able to support students to make meaningful contributions to the global learning and sustainability narrative. The two central questions that this paper seeks to answer are: Which additional innovations in curricula and new epistemologies should universities in Zimbabwe and Austria implement in order to educate graduates for a sustainable future? What can universities in the South and in the North learn from each other? In attempting to reflect on these questions, pertinent lessons will be drawn from initiatives in Austria and Zimbabwe to build capacity to achieve the Education for Sustainable Development (ESD) agenda through various strategies.

Keywords: global learning for sustainable development (GLSD), sustainable development goals, North-South-perspective, transformational imperatives, higher education

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****Correspondence:***
Franz Rauch
Franz.Rauch@aau.at

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INTRODUCTION

This study reflects developments at universities in Austria and Zimbabwe. The North-South perspectives will be paramount for drawing lessons from the initiatives of the universities in the North and South with the goal of mutual learning. Sustainable Development Goal 4, aspiration 4.7 stipulates that by 2030 all learners acquire the knowledge and skills needed to promote sustainable development (UNESCO, 2017). A major role of the university in society is to generate and transmit knowledge which should ultimately lead to the transformation of society (Moscardini et al., 2020; Pee and Vululleh, 2020). This means that the design of curricula has to address the current dichotomy between knowledge and skills by embedding essential competencies which will impart "A complex of knowledge, skills, and attitudes that enable successful task performance and problem solving on real-world sustainability challenges and opportunities" (Wiek et al., 2011). For that

reason, it is imperative that higher education institutions in the twenty-first century question their role in society in order to be relevant to the global agenda of sustainable education (Steele and Rickards, 2021). The global landscape in higher education is inexorably shifting as a result of major global forces of change in the interwoven domains of economy and politics as well as in social, demographic, geospatial, and environmental developments. Higher education cannot, therefore, remain immune to these global problems and changes. Rather, universities should proactively be the agents of change if the goal of higher education is to transition society to one of education for the sustenance of livelihoods and the environment (Stephens et al., 2008). It is against this backdrop that higher education urgently needs to respond to the global changes by re-orienting curricula, teaching, and learning to educate graduates for the future. Two studies will endeavor to answer two key questions: Which additional innovations in curricula and new epistemologies should universities in Zimbabwe and Austria implement in order to educate graduates for a sustainable future? What can universities in the South and in the North learn from each other?

Frisk and Larson (2011) highlight that UNESCO provided the impetus for Education for Sustainable Development as early as the late 1990s when they declared that education is the most effective means that society possesses for confronting the challenges of the future. Indeed, education will shape the world of tomorrow. In a more recent UNESCO (2003), the United Nations Plenary Assembly proclaimed 2005–2014 the Decade of ESD. Current international United Nations programmes such as the Sustainable Development Goals—especially goal 4 "Quality Education" (UNESCO, 2017), the 2015 UNESCO Global Action Programme on Education for Sustainable Development (UNESCO, 2014), and the currently launched Programme ESD for 2030 (UNESCO, 2020)—show the significance of the issue.

From the UNESCO standpoint, education for sustainable development entails integrating key sustainable development issues into teaching and learning. This may include, for example, instruction about climate change, disaster risk reduction, biodiversity, poverty reduction, and sustainable consumption. It also requires participatory teaching and learning methods that motivate and empower learners to change their behaviors and take action for sustainable development. ESD consequently promotes competencies like critical thinking, systems thinking, futures thinking, values thinking, strategic thinking, and collaborative problem-solving (UNESCO, 2003).

The concept of global learning has been encapsulated in ESD into a paradigm referred to as Global Learning for Sustainable Development (GLSD) which "includes the objective of resolving global problems, involving critical thinking, skills, and values, as well as socio-cultural awareness" (Anderberg et al., 2009; Nordèn and Anderberg, 2010). The global learning perspective means that students are exposed to problems in a global context to broaden their approach to issues and entrenches critical thinking and innovative skills (Senge et al., 2006; Sterling, 2011; Wals and Corcoran, 2012). For this to be achieved, Anderberg et al. (2009) and Nordèn and Anderberg (2010) call for cooperation and collaboration between the North and South on GLSD with the aim of bringing diversity, multilingual aspects as well as various local experiences into the global arena. Two interrelated issues can be distinguished: (a) The general issue that GLSD includes bringing indigenous knowledge systems and local knowledge into the global arena, for instance being able to benefit from both one's own local knowledge and other local knowledge from various parts of the globe, (b) the question of how to do so in African as well as in European contexts.

The paper consists of the following sections: the context which provides the background to the two cases under study; the next section presents an insight into the reforms undertaken in the North and South to transform the curricula in these contexts; this is followed by a discussion and finally a conclusion to the paper.

CONTEXT

The paper compares two cases of approaches used for ESD/GLSD in higher education. It is acknowledged that the cases to be compared are different in many respects, but as pointed out by Goggin (1986), the logic for the authors' case selection is to maximize the differences of the phenomena to be examined in order that the universities in the North discover new insights from the case in the South and vice versa. In a networked world, forging collaborations and partnerships with other higher education institutions becomes paramount with the goal being mutual learning.

Zimbabwe has 18 universities (state-funded and private), 8 polytechnics, and 14 teacher training colleges. Efforts are being made to "remodel university curricula to improve the competitiveness of local tertiary qualifications" (Tirivangana, 2019). The initiatives by the Ministry of Higher and Tertiary Education, Innovation, Science and Technology Development (MHTEISTD) are a response to the African Union's Agenda 2063 (The Africa We Want) which has 7 aspirations and 20 goals, the 17 Sustainable Development Goals (SDG) espoused by the United Nations. Agenda 2030 and the SDGs have similar goals in their broad plan of the socioeconomic transformation of societies. In that regard, higher and tertiary education in Zimbabwe is being aligned to these dictates and has thus espoused the transformation of curricula so that it is able to foster key competencies and skills in graduates which will enable them to respond to the needs of their local societies and the country in general.

This transformation agenda has been done through two initiatives, namely, the Education 5.0 thrust that includes innovation and industrialization to the university mandate in line with the Sustainable Development Goals and the harmonization of the minimum bodies of knowledge in the course content in universities with the aim of ensuring that all higher education institutions infuse sustainable development.

Austria has 22 public universities and 14 university colleges of teacher education. The discussion of sustainability in teaching has a long tradition in Austria in the tertiary sector. The UN Decade

for ESD was the initiator for sustainability lecture series and both interdisciplinary and inter-university courses at all universities in Austria. With the launch of the Sustainable Development Goals, Austria made a clear commitment for their implementation. The main tool for this is the Overall Austrian University Development Plan. This plan is a technical and strategic planning instrument of the Federal Ministry of Education, Science and Research, which serves to shape the overall Austrian university landscape. It serves as the basis for the development plans and for the performance agreements of the public universities. Sustainable Development is a central topic in the performance agreements between the Federal Ministry of Education, Science and Research and the universities. Furthermore, the Austrian universities are members of the Austrian University Conference (uniko) and signed the uniko-manifest for sustainability that highlights the responsibility and role of Austrian universities to make a significant contribution to sustainable development.

Another initiative shaping the development of Austrian universities with regard to ESD is the Alliance of Sustainable Universities in Austria and its Universities and Sustainable Development Goals project (UniNEtZ), which will be described in further detail in the next section.

INSIGHTS INTO THE REFORMS IN HIGHER EDUCATION IN ZIMBABWE AND AUSTRIA

Insights From Zimbabwe

This section will present insights into the recent and ongoing reforms that have taken place in higher education in Zimbabwe. The underlying thread of these reforms is the infusion of the Sustainable Development Goals, in particular, Goals 4 and 9, into curricula. The reforms which will be highlighted here have taken place within the past 3 years with the intent of the university becoming responsive to the global changes by starting dialogue on transforming curricula to educate graduates for the future.

Example 1: Infusing the Heritage-Based Philosophy in Curricula for Sustainable Development

One transformation that has occurred in curricula in Zimbabwe is the Education 5.0 thrust in higher education. Previously, higher education in Zimbabwe focussed on three missions, namely, teaching, research, and community service. With the changing dynamics in the global arena and with the fourth Industrial Revolution which requires a different set of skills, the form of education that was currently prevailing in the higher education sector in Zimbabwe was proven to be inadequate particularly in light of the global problems that graduates will be expected to deal with at a personal and collective level. In an attempt to foster attributes that promote sustainability and alignment to global learning, the thrust of Education 5.0 includes five missions that focus on teaching, research, community service, innovation, and industrialization with the goal of educating graduates who will be well equipped to contribute to the economic and social development of the country. The overall aim of Education 5.0 is to industrialize the economy through research and innovation which will ultimately promote sustainable economic development. Education 5.0 is couched on the heritage-based philosophy in that science and technology development will exploit the natural resources and environment, local knowledge, and culture. This resonates with Agenda 2030 whose plan of action is for people, planet, and prosperity, thereby this reform will ultimately drive social change and motivate sustainable development.

Lessons Learned

The reforms in higher education in Zimbabwe as outlined herein are attempts to educate graduates for the future; graduates who possess creativity and innovative skills to produce goods and services and who will ultimately become key players in sustainable development. Further, the heritage-based philosophy is based on a people's resources, history, monuments, tradition, religion, language, philosophy, physical and metaphysical environment. This means that in teaching and learning, locally available natural resources and solutions will be made reference to in addressing local problems. Education will therefore cease to be divorced from the local context, but is being re-imagined so that it is able to improve livelihoods and promote sustainability. This approach will ensure that quality teaching is achieved and that the knowledge that students are exposed to as well as the knowledge that they access are in sync with transformative teaching and learning (Förster et al., 2019).

Example 2: Harmonizing University Curricula

The other reform in higher education in Zimbabwe is the harmonization of core modules of similar degrees through the Minimum Bodies of Knowledge and Skills (MBKS) program. This reform requires 80% commonality in the core modules offered by universities while still leaving room for the introduction of some minimal (20%) unique aspects at the institutional level. What can perhaps be commented on at this juncture is the room for creativity that has been given to individual institutions. This is where these institutions can take a leaf from initiatives from other countries and cultures in their quest to offer ESD-informed programs.

The MBKS program was formulated and agreed upon by program experts in the different universities. Several meetings involving key stakeholders were held over a period of 1½ years. At these meetings, similar programs offered by different universities had their minimum bodies of knowledge agreed upon so that what is taught in university A is similar to university B. These meetings were attended by faculty/institute heads, selected senior scholars, professional bodies and associations, relevant ministries, and student representatives. Programs and courses/modules were discussed according to disciplines. It was at these meetings that program experts and representatives of the respective disciplines deliberated on and consolidated their academic programs. This approach will facilitate the hassle-free transfer of students between institutions without compromising the quality of their program of study and also without prejudicing their credit scores.

Lessons Learned

This exercise has played a role in the benchmarking of programs locally. The experience from faculties at different universities who have been undertaking course review attests to the fact that the process has now been made manageable because the reference point has already been established through the agreed course synopses. It is only the 20% that represents the additional content that a lecturer has to develop. The operationalization of this reform is still ongoing, hence lessons that can be derived relate to the process of formulating the MBKS. Vital lessons will undoubtedly be learned in a couple of years once the programs have gone through their cycle.

Insights From Initiatives in Austria

The Austrian examples were chosen because they are innovative and not isolated initiatives but connected to the University as an organization (Example 1) and are part of an Austrian-wide network (Example 2). Additionally, these examples are selected because the authors were involved in both of the initiatives. Evaluations and reports from both initiatives form the data basis for the selection and the presentation (Hübner et al., 2014; Weberhofer et al., 2020).

Example 1: A University on the Way to Implement Sustainable Development

The first Austrian case at the University of Klagenfurt focused on an interdisciplinary elective "Sustainable Development," which is intended as an instrument for the implementation of sustainability at the University of Klagenfurt. The development plans of the University of Klagenfurt since 2006 have included sustainability as highly relevant from a social and cultural science perspective (Hübner et al., 2014).

In light of some current empirical literature (Bray, 2008; Ellis and Weekes, 2008), the team of course lecturers decided that the teaching and learning methods to be chosen within the elective Sustainable Development have to be based on the following principles: inquiry-based learning, problem- and research-based learning and building of learning communities. Additionally, Sustainable Development has to be viewed from different disciplines. Hence, the course contributes to fulfilling the requirements of Education for Sustainable Development in higher education, while helping students to gain important theories, competencies, and methods to meet the demands of the present time and to ensure a future that is worth living.

The dimension of traditional, regional knowledge comes into play when focusing on local regions in the province of Carinthia where the University of Klagenfurt is located. One of these regions is the biosphere Carinthian Nockberge. In 1980, the Carinthian public made a forward-looking decision: the Nockalm was not to become a ski circus, but was to serve as an exemplary alpine region and as a habitat and recreational space for future generations. Protecting the diverse flora and fauna is just as important as preserving the countrified scenery and local knowledge in agriculture, health, and nutrition. UNESCO recognized these efforts in 2012, awarding the natural protection site the designation Biosphere Reserve. The focus is on the combination of natural biodiversity, cultural characteristics, sustainable farming, and international research. The biosphere reserve Carinthian Nockberge has a partnership with the University of Klagenfurt, called science_link Nockberge, with the goal to support collaborative learning and research, for example, in the context of master's and doctoral theses (Falkner and Rauch, 2020). Furthermore, the University of Klagenfurt accompanied several projects that investigated unique Austrian traditions, knowledge, and intangible cultural heritage in remote regions, like the cultivation and processing of flax in the Lesach Valley (Strohmeier et al., 2015) or the traditional baking of bread. The center of the research focus was the dynamic process of transfer and application of local knowledge and practice, as well as the meaning of living traditions for the local community. The reflection of intergenerational encounters with local cultural heritage required a manifold process of communication and interaction.

Lessons Learned

After the course was held for the first time, an external professional was commissioned to evaluate interviews with the core teaching team. The interview guide covered the process of the development of the course as well as the experiences of the interviewees during the first implementation phase. The six interviews were transcribed and categorized using the method of qualitative content analysis (Mayring, 2014). The findings were reported back to the development team. Based on these data and ongoing reflections of the teaching team, the following lessons learned could be extracted:

- Pedagogical innovations are always unique, depending on the institutions involved, the region, historical paths, the educational culture in which it is embedded, and last but not least, the acting personalities.
- The process of implementing Sustainable Development (SD) at the University of Klagenfurt started in 2005 when it was mentioned in the development plan; thus, it has been running now for more than 16 years. However, the question still remains: How can SD be brought into existence at the university as a place of organized rationality? Closely related to this question is the one of how the collective process of decision-making takes place within the university.
- The internal evaluation of the pilot course by a colleague interviewing most of the participating students and the teaching staff helped tremendously in going beyond a superficial understanding of the course's successes and weaknesses. It became a useful basis for revising the course.

Example 2: Project UniNEtZ—Options Paper for the Achievement of the Sustainable Development Goals in Austria

UniNEtZ brings together academics and artists from 16 Austrian universities as well as external partners. The overall aim of the project is to develop strategies to realize the UN Sustainable Development Goals (SDGs) in Austria. From 2019 to 2021, an option report will be developed, intended to help the Austrian government to implement the SDGs. As the SDGs are mutually shaping each other and can only be realized through inter- and transdisciplinary thinking, UniNEtZ represents a broad spectrum

of expertise from subject areas such as social sciences, science, technology, engineering, and mathematics (STEM), and the arts. A number of synergy effects are likely to emerge as a result of the project, including the implementation of sustainability in research and teaching as well as a stronger collaboration between universities and society.

Member universities have taken on the role of coordination and participation of individual SDGs. While coordinating universities manage and gather activities and knowledge, participating universities engage in terms of content. All member contributions are equally valued and much appreciated. Through this intensive cooperation and professional discussion of SDGs, contributions are collected, critically examined, and modified in order to develop different options. The networking between universities and the implementation of the SDGs in research, teaching, and society is at the heart of UniNEtZ.

The University of Klagenfurt and the University of Innsbruck have taken on the coordination role of SDG 4 "Quality Education" in Austrian higher education Participating members of SDG4 are 14 universities and stakeholders. The SDG 4 group currently has around 80 members. Regarding SDG 4, the latest reports show the positive developments in quality education in Austria in recent years. In the Subgroup SDG 4, the appreciation and reflection of local knowledge is part of the central concepts of ESD. A position paper was developed which resulted out of the expertise of SDG 4 participants as well as existing studies and literature. The SDG groups are currently working on specific options to implement the goals of SDG 4.[1] These options are summarized in two levels: Level one focuses on the fundamentals which relate to the whole education system, such as observing the principles of education for sustainable development, global citizenship, and digitalization. On a second level, the options are categorized in the following areas: Early childhood education (kindergarten, preschool), School-age education (primary, secondary, extracurricular education), Tertiary Education (universities, technical colleges, university for teacher education), Adult education (formal and non-formal).

Lessons Learned

The development of (self) critical reflection and process competency is essential not just for individuals but also for groups, organizations, or social subsystems. Such a common (social) learning process requires the development of additional skills, such as the ability to make collective decisions and act on the basis of deliberations. The ability to empathize is also essential. Thinking about others, experiencing and enduring value contradictions, also emotionally, makes it possible to deal with moral claims that result from the normativity of the sustainability concept (Rauschmayer and Omann, 2012).

For the purposes of drawing inferences, it can be summarized that the participating universities have taken a move to participate actively through the systemic coordination of the SDGs with the aims of addressing the Sustainable Development Goals across faculty and across the university and identifying possible areas of research. The other aim and perceived benefit of this initiative is capacity building in research in Sustainable Development in lecturers and students. UniNEtZ is a trial that the universities in Austria try to put initiatives in place which drive the Agenda 2030 and create new frontiers of learning and research.

[1] https://www.uninetz.at/nachhaltigkeitsziele/sdg-4-hochwertige-bildung

DISCUSSION

The World Data on Higher Education (UNESCO, 2010) states that education is expected to contribute to national and economic development. The transformation of higher education in Zimbabwe through the MBK/S and the two examples from Austria show that the global agenda that higher education should espouse ought to resonate with the Sustainable Development Goals and Agenda 2030 (UNESCO, 2017).

The introduction of the course on Sustainable Development in universities in Austria and the benefits derived therefrom, serve as an impetus for higher education in Zimbabwe to continue with the transformation trajectory. The initiatives from the global North have borne fruits and have imparted key skills and competencies that have transformed the higher education system from being merely examination-driven. This means that if the efforts to transform higher education are supported and implemented, the learning achievement for higher education in Zimbabwe will eventually transform from being "academically and examination-driven" (UNESCO, 2010), to an education that drives social change, realizes returns on investments and also one that achieves SDG4.7. The dominant narrative in contemporary times should thus be about the relevance and impact of higher education on socio-economic development. Going forward, the accreditation of modules/courses and not just degree programs could be a way of improving quality as well as ensuring that curricula continue to respond to the global challenges.

Also, the local experiences advocated for ought to be considered within the broader narrative of the pivotal role of indigenous knowledge in education for sustainable development. Local indigenous knowledge should be accorded enough space in the Sustainable Development Goals because in local knowledge ways to mitigate some of the local and global problems are enshrined (Santos, 2014). The proposition by Anderberg et al. (2009) of collaborations between universities from the North and South is befitting of the global learning paradigm as it would expose students and staff to the problems besetting societies in other parts of the world and how those problems are being resolved at the local level. The lessons to learn from this inter- and transdisciplinary approach are that students, lecturers, and researchers work out relations and options for joint actions and reflect on these actions (Hübner et al., 2014) which is crucial for the success of Education for Sustainable Development.

CONCLUSION

A question was posed at the onset of this paper: What can universities in the North and in the South learn from each

other? The simple answer is that cooperation and synergies in various areas need to be encouraged between universities in the North and South for the benefit of both staff and students. These synergies will include pedagogical innovations such as the implementation of active learning strategies, the use of local knowledge, as well as the introduction of guidance for teaching. Staff and student exchange programs can also be pivotal in bolstering the exchange of knowledge and expertise. The synergies will be beneficial to both North and South contexts. The insights presented from the initiatives to transform curricula in universities in the North and in the South are valuable milestones that can be drawn upon to inform the cooperation and also inform future curriculum planning and design. The innovative teaching approaches could incorporate practical problems that call for action research (Gibbs et al., 2017), as a way of promoting the participatory approach in teaching and learning.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

AUTHOR CONTRIBUTIONS

NM-H and FR: conception of the manuscript, contribution of cases, and writing. MD: co-writing. All authors contributed to the article and approved the submitted version.

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