

TOWARDS ACHIEVING SDG 3 AND 4: THE ROLE OF UNIVERSITY RESEARCH THROUGH IMPLEMENTATION OF QUALITY ASSURANCE IN EAST AFRICA

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Abstract

Education has been acknowledged to be a human right, a public good and a public responsibility. Without inclusive and equitable quality education and lifelong opportunities for all, nations will not succeed in achieving gender equality and breaking the cycle of poverty that is leaving millions of children, youth and adults behind (UNESCO, 2020). In the labour of attaining the sustainable development goals, quality education, good health and well-being - Goals 3 and 4 respectively - have been placed as the central dogma in achieving the global goals. The aim of this paper is to demonstrate the role of university research through the implementation of quality assurance in attaining quality education, good health and well-being for sustainable development in East Africa. The paper examines the heart of the sustainable development goals (SDGs) - Quality Education & Good health and well-being - in the context of how university researchers can get it delivered. This paper perceives promoting interdisciplinary and collaborative research, linking research outputs into teaching as well as commercialization of science as the leeway in assuring and achieving quality education, good health and well-being through higher institutions (universities) in East Africa. The paper concludes that achieving the ambitiously adopted sustainable development goals by United Nations in quality education, good health and well-being can be achieved by adopting, implementing and practically applying quality research outputs from universities done under quality assurance measures. The paper recommends amongst other measures that implementation of research-tutored system by designing curriculum that emphasizes learning focused on students writing and discussing research papers or essays.

Key words: Sustainable Development Goal (SDG), Education, Health, Well-being, University research, Quality Assurance

Introduction

The indispensable urge for a more sustainable world was unanimously acknowledged by the United Nations members at his seventieth (70th) session in 2015, when seven-teen (17) Sustainable Development Goals (SDGs) were set, where positioning education, good health and well-being are at the center of the strategy to promote the transformational agenda. It was quite noted that obtaining a quality education and ensuring healthy lives are the foundation to creating sustainable development. Thus, this has been identified as important area of focus for governments, business leaders, universities, non-government organizations (NGOs) and the media. Advancing quality education is not only critical for enhancing people's lives through building of human capital, but also promote economic growth, decent work, elimination of extreme poverty as well as surmounting the long held gender and other inequalities that has become the hallmark of many underdeveloped and developing nations across the world today (Sachs *et al.* 2019).

The yearnings for more sustainable world became more evident with the global financial crisis of 2008 and has been conveyed by the United Nations (UN) through several initiatives, including the Global compact, Millennium Development Goals and the Paris Agreement, as a catalyst that highlighted the importance of a global sustainable development strategy, bringing together companies, public sector and civil society (Annan-Diab and Molinari 2017).

Problem statement

Scholarly researches have been done since the United Nations' adoption of the sustainable development goals in September, 2015. However, governments, business leaders, non-government organizations and the media has been the cynosure of all eyes, forgetting the irresistible and indispensable role of research outputs from higher institutions in achieving the goals. Mary-Louise Kearney, Director of the UNESCO forum on Higher Education, Research and Knowledge, is more true when he said: "Knowledge generated by research is the basis of sustainable development, which requires that knowledge be placed at the service of development, be converted into applications, and be shared to ensure widespread benefits". Hence, this calls for the need of this paper with the review of the role of university research through practical implementation of their interdisciplinary and collaborative research output through implementation of quality assurance in attaining quality education, good health and well-being in East Africa.

Objective

This paper aims to demonstrate the role of university research through implementation of quality assurance in attaining quality education, good health and well-being for sustainable development by linking research outputs into teaching and commercialization of science.

Sustainable Development

This paper adopts the definition of sustainable development proposed by the Brundtland commission (WCED 1987): "developments that meets the needs of the present without compromising the ability of future generations to meet their own needs", and reiterated by International Institute for Environment and Development (IIED 2002): "the goal of integrating economic activity with environmental integrity, social concerns, and effective governance systems, while maximizing the contribution to the well-being of the current generation, fairly sharing the cost and benefits, without compromising the potential for the next generations to meet their needs".

Quality Education

Education uplifts a country, where a large percentage of its people are educated prospers, as the future of a country lies in the production of highly educated people (Ololube *et al.* 2009). Quality education is attained when all-inclusive term in which learners as well as environments for education are healthy, content is relevant, teaching is student-centered, and outcomes are all encompassing bringing about all that is good from the students educational experience; an education that is well designed to provide the recipient with an all-round development of skills and potential to achieve success in their future endeavors in a society.

Quality Assurance in Education

The new international Webster Comprehensive Dictionary of the English language, Deluxe Encyclopedic edition (2010) defines quality as "that which makes a being or thing such as it is a distinguishing elements or characteristics; the

characteristics of anything regarded as determining its value, place, relevance, worth, rank, position etc; or conditions of a thing so determined. Quality implies degree of excellence and relative goodness.”

On the other hand, Oduma (2014) defined assurance as a positive affirmation, full confidence, undoubting conviction, self-confidence, firmness of mind and certainty. It is regarded as a statement that gives assurance about the certainty of an event to occur particularly when there have been doubts about it (Aworanti 2012). The purpose of quality assurance has been attributed to capacity building within an institution for pursuing quality improvement leading to stakeholder's satisfaction, which underscores it's continuous and conscious process aiming at excellence (Oduma 2014).

University research and the Sustainable Development Goal 4 (Quality Education)

Proposing with Annan-Diab and Molinari (2017), building on the Millennium Development Goals set in 2000, the seven-teen SDGs were formally adopted by all member states of the UN in 2015 with time-bound target aimed at ensuring prosperity, people, planet, peace and partnership by 2030 (UN 2015). Higher education plays an essential role in the society by creating new knowledge and fostering innovation.

Attaining quality education has been one of the concerns of the East Africans, following the collapse in 1977 of the former East African community that had established the Inter-University committee in 1970 in Kampala, Uganda, for the purpose of promoting university cooperation, Vice Chancellors of universities of Nairobi in Kenya, Dar es Salaam in Tanzania, and Makerere University in Uganda met in 1980 in Nairobi, Kenya, to discuss future cooperation prospect between their respective institutions. Subsequently, they signed a memorandum of understanding that led to the establishment of the Inter-University council of East Africa with headquarters in Kampala. This memorandum spells out IUCEA's objectives, functions, institutional set-up, system of governance, and management (Shabani *et al.* 2014). This marks the beginning of the collaborative efforts in ensuring quality education in east African universities.

Higher education through their research plays an essential role in society by creating new knowledge, scientific discovery and fostering innovation. Research serves many purposes and goals, however, Hollingsworth (2008) captured it well when he defined high quality research as creative, ground-breaking research, often as a result of small, step-wise advances that leads to a new way of thinking about or approaching a challenge.

This paper proposes ways in which university research will help in the attainment of quality education in east Africa for sustainable development:

- Linking research and teaching
- Commercialization of research outputs
- Supporting interdisciplinary and collaborative research

Linking research and teaching

In the global competition of higher education, research intensity has become the key indicator of the quality of universities. The link between research and teaching activities among academic staff has been studied extensively during the last decades, from different angles and with conflicting results (see Hattie and Marsh 2004; Halliwell 2008 for review). Recent developments in the higher education landscape have made the issue even more relevant, also with the quest of attaining quality education. There are a number of models and frameworks that may be useful for thinking about how to link research and teaching in other to attain quality education (Mägi and Beerkens 2016).

The symbiosis between research and teaching, which is often taken for granted, has been highlighted when Hattie and Marsh (1996) said; "the common belief was that teaching and research were inextricably intertwined is an enduring myth. At best, teaching and research are very loosely coupled".

Lindsay *et al.* (2002) reported an overall positive association between student satisfaction and research activity on several indicators including credibility enhancement, relevance, and motivation. Moreover, Marsh and Hattie (2002) distill the case for research-rich teaching strategies in these terms: “*Research enhances teaching through the introduction of new topics and methodologies. Teachers discussing their own research provide a sense of excitement about the results and how they fit into a larger picture. Active researchers are more effective at instilling an actively critical approach to understanding complex research findings rather [than] a passive acceptance of facts. Students appreciate teachers who present research that the teachers have actually conducted*”.

Jenkins and Zetter (2003) describe three ways of linking research and teaching as:

- Presenting your research to students
- Engaging students in research processes
- Engaging in research/ scholarship about teaching in your discipline

A learning society and knowledge economy require specific competences, such as capacity for independent learning, critical thinking, and understanding the process of knowledge creation; and all this presumes some exposure to the research process. Accordingly, education is enhanced when the curriculum is strategized such that it intrigues student's participation in a variety of research-based activities and/or induct them into research community (Brew 2010).

Studying in a research-active environment appears to benefit students directly, as evidenced by higher student satisfaction (Jenkins 2004) and improved motivation (Durning and Jenkins 2005; Healey 2005). Trigwell (2005) found that students in a research-led environment demonstrate a higher quality learning experience and they are more likely to embrace broader rather than a shallow approach to their learning. Benefits of research activities on student development have been well documented in the literature (Justice et al. 2007; Pascarella and Terenzini 2005) and a research-related teaching approach has been found to benefit student learning (Brew 2010, 2013; Healey 2005; Ozay 2012).

Although the nature and the benefit of research-related teaching has received considerable attention in recent years (Malcolm 2014), its place in higher education policy and practice still tends to be vague. A stronger link between research and teaching may benefit also academics. Academics seem to value the combination between researches and teaching (Jensen 1988) and they recognize even under a strong research performance pressure that 'together they are more than just the sum of the parts (Smith and Smith 2012).

Commercialization of research

The concept of commercialization has been explained by scholars; Hogan and Thompson (2017) defined commercialization as the creation, marketing and sale of educational goods and services by profit providers. Commercializing scientific research or a breakthrough idea is really no different, in principle, from commercializing anything, except perhaps that it's more difficult in practice because of the steps required to turn basic research into something practical and because you are looking for a market for a product, rather than designing a product to fit an established, or obvious market (Fletcher and Bourne 2012).

Commercialization of research will contribute to technological innovations and economic growth in short term. The United Nations Development Programme (UNDP) recognized in the human development report, 1990 that the real wealth of a nation is the people (UNDP 1990) and as people gains more knowledge, they become more self-directed and comprehend social justice and equity in a better way. Higher education is no longer a luxury; it is essential for survival (UNESCO, 2000) and it must be seen as capital cost and an investment in human beings, which would yield a high return over many years (Mushkin 1962; Vaisey 1962).

Supporting interdisciplinary and collaborative research

In this modern day, it's of no doubt that the research being pursued at Universities are aimed to achieve deep understanding of physical, biological and social phenomena in order to contribute to the greater good of the society as well as enhancing new discoveries and technologies. However, it has become more prominent in recent decade that a common way to pursue these values is to foster interdisciplinary research (Leahey and Barringer 2020).

According to Clark and Wallace (2015) and cited by Annan-Diab and Molinari (2017), knowledge is classified as disciplinary (i.e. when disciplines work in isolation), multidisciplinary (disciplines working in parallel to address common goals), interdisciplinary (when disciplines work in an integrated way) and trans-disciplinary (when there are no limits between disciplines), being a discipline defined as "any comparatively self-contained and isolated domain of human experience which possess its own community of experts" (Nissani 1997).

Bugess and Slonaker (1978) highlight the dynamism and openness of interdisciplinarity:

Interdisciplinarity promotes ways and means for blending wisdom and science, for balancing free association and intellectual discipline, for expanding and refining information, and for building a problem-solving culture that mixes 'permanent' with 'transient' membership, thereby remaining open to new membership and fresh ideas while retaining a capacity for cumulative learning that refines, clarifies, and simplifies.

Implementing interdisciplinary and collaborative research will lead to openness and clarity of obscure knowledge, as there is increasing demand for problem solving ways in enhancing practical teaching practice which will eventually align with the SDG 3 (Quality education) through teaching it as discussed above.

The need for adopting an interdisciplinary approach for sustainable development education has been raised by several authors (Luppi 2011; Dale and Newman 2005; and Summers *et al.* 2005) and more recently by Leahey and Barringer (2020), which reported that efforts to develop and reorganize academic units in order to support interdisciplinary research are not futile, but needs more commitment in order to gain the intended consequence.

Thus, re-orientating the existing educational structure to foster more aspects related to sustainability and its three pillars (society, environment and economy) should be achieved in a holistic and interdisciplinary context, with teachers waving sustainability issue into the curriculum (UNESCO 2005).

University research and the Sustainable Development Goal 3 (Good health and well-being)

Ensuring healthy lives and promoting the well-being for all at all ages is essential to sustainable development. Although, significant strides have been made in increasing life expectancy and reducing some of the common killers associated with child and maternal mortality. However, health system need to focus on primary healthcare, offers health interventions for maternal, newborn and child health; effective prevention and treatment of infectious disease; and non-communicable disease control (Sachs *et al.* 2019).

Research in health and wellbeing is one of universities priority research areas and is strategically important within all of its institutions with the goal of understanding the fundamental underpinnings of health and disease by drawing on a wide range of academic skills and disciplines, working together to discover, refine and apply new interventions to improve health and wellbeing.

Conclusion

We believe that achieving the ambitiously adopted sustainable development goals by United Nations in quality education, good health and well-being can be achieved by adopting, implementing and practically applying quality research outputs from universities done under quality assurance measures through linking research with teaching, commercialization of science and supporting interdisciplinary and collaborative research.

Recommendations

Attaining sustainable development goals in quality education, good health and well-being for all is important and indispensable especially at this time when there is quest of sustainable world where people would be more informed and flourish in healthy well-being which will enhance the social and economic development in East Africa. In finding ways to achieve this, it is therefore recommended that:

1. Implementation of research-based system by designing curriculum structured around inquiry-based learning activities in which students do research.
2. Implementation of research-tutored system by designing curriculum that emphasizes learning focused on students writing and discussing research papers or essays.
3. Implementation of university's research outputs done under quality assurance control will positively influence the lives of individuals, families, communities and organizations, and will translate theory and research into effective policy and practice. This will align and meet the sustainable development goals in good health and well-being for all.

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