



The scholarship of university-community engagement: Interrogating Boyer's model



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ABSTRACT

Albeit with different conceptualisations, the engagement between universities and external communities continues to gain significant currency. While the emphasis has been on more socio-economic relevance in a period of significant financial constraints and a changing clientele, a more significant area of engagement has been on promoting the scholarship of engagement towards regional/local development. The praxis and outcomes of community engagement continues to be surrounded by strong debate on issue such as its impact on the core functions of the university, teaching and research. This article sheds light on the community engagement practices from a case-study university in Africa. Using Ernest Boyer's proposed scholarship of engagement model as a framework, findings provide evidence that, different contextual specificities affect the way university-community engagement practices evolve. The methodology involved an analysis of primary and secondary data collected through interviews with policy and academic staff. The article concludes with an argument that the success of university-community engagement in fostering social and economic development significantly relates to how much the practices of engagement is foregrounded in the universities' core policy and practice. But also on how much academic scholarship draws on engagement activities. The challenge lies in ensuring this balance.

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1. Introduction

The idea of community engagement (CE) has remained a central, though contentious discourse in higher education (HE) milieus over the last half-century (Benneworth et al., 2008; Farrar and Taylor, 2009). Albeit the wide agreement for universities to contribute to society beyond teaching and research, the conceptualisation of this third function has varied across regions, type of universities and even academic disciplines (Kruss, 2012; Benneworth and Sanderson, 2009). The ideological versus instrumental debate continues to dominate the engagement discourse (Martin and Etkowitz, 2000). Embedded in the historical thinking, it is argued that CE models have increasingly witnessed a shift from the one-way to a two-way model. Where the former emphasises the delivery of knowledge and service to the public while the latter focuses on the interactive exchange of knowledge between higher education institutions (HEIs) and their communities in the context

of partnership, reciprocity and mutual learning (Weerts and Sandmann, 2008). Arguably, CE is increasingly shifting from merely being seen as supporting communities to being located in the university knowledge function.

Against this background, a number of definitions and theoretical positions on the relationship between universities and their immediate and extended communities have been proposed and adopted. This paper adopts the definition proposed by the Centre for Higher Education Transformation (CHET), which defines CE as

...a systematic relationship between Higher Education [institutions] and [their] environment [communities] that is characterised by mutually beneficial interaction in the sense that it enriches learning, teaching and research and simultaneously addresses societal problems, issues and challenges (Centre for Higher Education Transformation (CHET, 2003: 4).

This definition emphasises CE to be embedded in the process of knowledge exchange between universities and communities through co-inquiry (jointly undertaking research activities), co-learning, interdisciplinary, and use of knowledge, which benefits academia while solving real world problems (Bender, 2008).

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Regarding its practical implementation, the vast and different interpretations are associated with the debate on what constitutes CE (Kruss, 2012; Jongbloed et al., 2008). The debate remains on the question “to what extent are CE activities undertaken in the context of knowledge exchange?” In trying to answer this question, this paper uses the four scholarships of engagement proposed in the Boyer’s model to interrogate the process of CE at the Sokoine University of Agriculture (SUA), in Tanzania. Using empirical evidence, the paper presents the complexities around CE within a different context from Boyer’s and how the contextual specificities influence the conceptualisation and practices of CE within the case study university. The next section presents a brief review of the literature on CE. Section three unpacks the Boyer’s model, as a conceptual tool for understanding CE. Section four and five provides a background to higher education in Tanzania. Section seven presents key findings from the study and implications for CE at SUA and beyond.

2. A recap of the literature

CE is conceptualised and even operationalised differently within many HE systems. Bender (2008: 86) argues that “different theorists and practitioners of CE propose different definitions and interpretations of their . . . , framework and strategies-many of them permissible, but none fully definitive”. Some view it as the university’s service to the communities through among other things transferring or disseminating knowledge to the communities (Weerts and Sandmann, 2008). Others conceptualise CE from entrepreneurial perspectives in which universities engage in external activities with the aim of generating income in this era of stringent financial conditions (Clark, 1998). There is also a view that CE should be mutual and collaborative process of knowledge exchange between the universities and communities (Holland and Ramaley, 2008).

The widespread adoption and implementation of CE centred on two-ways exchange of knowledge has been transforming many HEIs across the globe. In fact, Matthews (2010) argues that more HEIs are making commitments to introduce forms of CE into their teaching and research practices. The CE concept has gradually replaced pre-existing terminologies and practices such as service, outreach, extension, community development, community based education as well as clinical practicals (Bender, 2008; Roper and Hirth, 2005). More importantly, it is noted that CE emerged as counterweight of the traditional one-way in which academic experts transferred their wisdom to the masses in inequitable manner (Ibid). As such, there has been strong emphasis towards more interactions or partnerships built around a mutually beneficial process of knowledge creation and exchange between the university and the outside world (Holland and Ramaley, 2008).

However, due to various interpretations of the CE, universities are grappling to articulate what counts as ‘engaged practice’ (Kruss, 2012). The list of CE activities or practices is long and it cuts across issues of knowledge generation and transmission; myriad partnerships; entrepreneurship initiatives; cultural, political and social development; as well as links with local and international donors and other institutions (Farrar and Taylor, 2009; Jongbloed et al., 2008; Clark, 1998, among others). As such, CE practices are not definitive because of the contextual dimensions coupled with changes taking within and beyond HEIs. Therefore, they vary according to HEIs’ strategic framework, geographical location, capacity, expectations placed on them, the level of the country’s economy as well as the articulation of their role at the level of national policies (Goddard and Puukka, 2010).

Inasmuch as CE is broad, the main argument remains to be on the nature of relationship between ‘inward’ vis-à-vis ‘outward’ orientations. On the one hand, an overemphasis on basic

knowledge activities of teaching, learning and research aimed at strengthening the core functions only, could result to an inward looking university, usually referred to an ‘ivory tower’ (Cloete et al., 2011; Etkowitz et al., 2000). A long standing criticism associated with the inward view is that universities have for a long time distanced themselves from their immediate communities. On the other hand, an overemphasis on the engagement activities (i.e. an outward) may weaken teaching, learning and research (Cloete et al., 2011). Embedded in the latter observation, this paper argues that the core functions of universities can and should not be weakened if CE is understood and practiced in the context of knowledge production and exchange (Muller and Subotzky, 2001). Through such framework, CE may be informed by and conversely informs teaching and learning, and research (Bender, 2008: 89). This paper uses the Boyer model described below to interrogate the process of CE within an African university.

3. Revisiting Boyer’s model for university-community engagement

The Boyer’s model of CE emerged in the early 1990s as a critic of the traditional, monolithic, constricting and rigid academic silos of research, teaching and engagement or service to community (Boyer, 1996; 1990). The model presents four interrelated dimensions of CE as a form of knowledge exchange between universities and communities (Holland, 2005). In developing this framework, Boyer (1996, 1990) suggested that the academy should commit in searching for answers to the most pressing social, civic, economic and moral problems through the use of four domains of engagement. Broadly, Boyer emphasises the discovery, integration, application and teaching (transmission) of knowledge for the benefit of external audience (communities) and the development of the academia (Boyer, 1996).

The scholarship of discovery as described by Boyer (1996:26) insists, that “... universities, through research, simply must continue to push back the frontier of human knowledge”. In all disciplines, this scholarship lies at the core of new knowledge production in order to add to the stock of knowledge (Boyer, 1990). In CE, the scholarship of discovery pushes the agenda of collaborative research between universities and communities. As such, it elevates research as one of central outcomes of CE. Arguably, Boyer is of the opinion that any healthy engagement activity should be founded on the production of new knowledge for either the community or the academe. The scholarship of discovery is closely related to another important aspect of Boyer’s model—integration.

Boyer (1990:18) defines integration as “giving meaning to isolated facts, putting them in perspective . . . making connections across the disciplines, placing specialists in large context, illuminating data in a revealing way, and educating non-specialists”. The integration aspect is essential component in an era where strong emphasis is on cross-disciplines convergence. Put more succinctly, Boyer (1996) argues that there is an urgent need to place discoveries in a larger context and create interdisciplinary conversations. In CE context, integration might play an important role in connecting expertise from different disciplines but also in bringing together various types of knowledge in communities. Furthermore, integration could lead to providing theoretical understanding of local/indigenous knowledge whilst packaging complex issues in more comprehensible manner for local stakeholders.

The scholarship of teaching according to Boyer (1990) is about how the academia is understood by others and the impact it brings to them. For Boyer (1990:33), “the work of professor becomes consequential only as it is understood by other”. As such, reading widely and being intellectually engaged are seen by Boyer as

critical elements for those who teach. In CE context this scholarship enables the creation of environments within which students, staff and community members equally engage in teaching and learning processes. As such, Boyer calls this a “communal act” as it allows knowledge to be communicated to different constituents while keeping the flame of scholarship alive. Thus, teaching in CE does not only move teaching from theoretical to practical level but also elevate all parties involved in CE to be active, encouraging critical thinking and life long-learning (Boyer, 1990).

Finally, there is a scholarship of application, which is about moving from theory to practice, and from practices back to theory (Boyer, 1996). This form of scholarship has gained prominence in recent years as more attention continues to be given to making knowledge useful to the society. The application aspect of Boyer’s framework is crucial in CE as it enables not only to generate new knowledge but to make the knowledge usable and relevant in day-to-day lives of communities. As emphasised by Holland (2005:12) “now, [HEIs] must become participants in a highly complex learning society where discovery, learning, and engagement are integrated activities that involve many sources of knowledge generated in diverse settings by a variety of contributors”.

In summary, Boyer’s model is arguably a more nuanced framework, which helps to think and practice CE in a context of knowledge exchange. This is embedded in its basic argument that academic collaboration with external communities should enrich both the university’s core functions while addressing challenges of the external communities. By interrogating Boyer’s model we intend to make a significant contribution on the role university” context plays on its application.

4. Tanzanian higher education and Sokoine University of Agriculture: An overview

HE in Tanzania, like in most African countries dates back to the early years of post-independence (1960s). University education started with the establishment of the University of Dar es Salaam (UDSM), which was first established in 1961 as part of the College University of London (Cooksey et al., 2003). Following the Parliamentary Act No. 12 of 1970, the University College Dar es Salaam became a fully-fledged university in 1970, re-named the University of Dar es Salaam. This university became the pioneer of HE in Tanzania. In terms of the roles of HE to the society, the former Tanzanian President Mwalimu Julius Nyerere stated that:

the University ... has a very definite role to play in development... and to do this effectively it must be in, and of, the community ... it’s in this manner that the university will contribute to our development ... In this fight the university must take an active part, outside as well as inside the walls (Nyerere, 1967).

Coming from a lone university system in the early 1960s, higher education in Tanzania has grown to consist of 11 public universities and university colleges, 23 private universities and university colleges with a total number of 166,484 students enrolled. Also there are 116 public technical colleges and 104 private technical colleges with a total number of 112,447 students. Another tier include 34 public teacher education institutions and 71 private teacher education institutions, which absorb a total number of 43,258 students. Broadly, by 2011/2012 the landscape of higher education in Tanzania comprised a total number of 359 HEIs enrolling about 322,189 students (Bailey, 2014). The Sokoine University of Agriculture is one of the universities born from the University of Dar es Salaam.

Located in Morogoro Municipal, SUA is one of the oldest universities in Tanzania. Its history dates back to 1965 when it started as Agricultural College. In 1970 SUA became a constitute college of the University of Dar es Salaam with a mandate to enhance agricultural output of the Morogoro environ through, among other things, outreach education, extension education and altruistic acts (Africa Institute for Capacity Development (AICAD), (2011). In 1984 SUA became a fully-fledged university. In his inaugural address at SUA in 1984, the then President of the Republic, Julius Nyerere said:

... the main objective of Sokoine University of Agriculture is not abstract research or training of academicians who can write learned treatises ... This university must be answering the needs and solving the problems of Tanzanian agriculture and rural life. Its aim must be, firstly, to contribute towards improved production and therefore improve standards of living for the people who live on the land or in connection with the land ... (AICAD, 2011).

The above statement indicates that while teaching and research have been historically considered the core functions of HEIs, SUA was commissioned with a more practical and outward oriented mission of engaging with communities, particularly in agricultural sector. With agriculture seen as a backbone or basis of Tanzanian development (Schneider, 2004), it is likely that SUA was named Sokoine University of Agriculture because it was the first agriculture university to be established Tanzania where agriculture sector was and continues to be at the fore front of the country’s economy. As captured in SUA’s research policy:

It remains the inspiration of this University to uphold the vision and guidance of the first Chancellor of this University and Father of the Nation (Mwalimu J.K. Nyerere) that the University should endeavour to answer the needs and solve the problems of Tanzania’s agriculture and rural life, manage natural resources on a sustainable manner and to contribute to improved production and therefore improved living standards of the people (SUA, 2010: 1).

SUA currently has four faculties with a total of about 450 academic staffs with masters and doctoral qualifications, 5563 undergraduate, 400 masters and doctoral students and about 225 non-degree students. Moreover, a number of institutes and centres have been established in the past few years. More importantly, some of these sub-units have been established with the aim of strengthening the university’s capacity to engage with the local milieus.

5. University-community engagement in Tanzania and at SUA

The foundation of what today is generally known as CE in the Tanzanian context dates back to the early 1960s when Tanzania attained her independence, established the first HEI and introduced socialism as the country’s socio-economic ideology. With the aim of building an egalitarian society based on the principles of socialism, HEIs were expected to develop an educated crop of young people able to use their knowledge and skills for the broader society. Universities were called upon to connect with the communities through voluntary works, national service programmes, continuing education, and other service mainly in rural areas (Ivaska, 2005). These approaches which were seen as an antidote to an elitist attitude by students and academics were mainly foregrounded in the socialist ethos advocated by political leaderships (Nyerere, 1967). In particular, the existing HEIs were called up to engage in fighting against what was identified as three enemies of development: ignorance, poverty and diseases.

From the 1980s to mid-1990s there was sharp decline in the emphasis on and the level of connecting HEIs with external communities. This was, among others, due to the shift from the socialist ideology to a more neo-liberal system coupled with deteriorated support for HE (Psacharopoulos and Patrinos, 2002). From a neo-liberalism context, CE was increasingly perceived as a marketing tool where entrepreneurial initiatives aimed at benefiting individual academics at the cost of the community and even the university itself. This was observed through the proliferation of practices such as consultancy and commissioned research (Ishengoma, 2010). Therefore, it can be argued that there have been numerous shifts within the notion of CE in Tanzania. These shifts can be attributed to the changing political, economic and social landscape of the country as well as the continent and the globe.

At SUA, CE started in the 1970s and was foregrounded with the notion of adult education, extension education and altruistic acts (AICAD, 2011). Following the establishment of SUA in 1984 there has been significant growth and expansion of the idea of CE. With the Institute of Continuing Education being a solitary unit responsible for CE by 1984, currently there are several units and/or departments that are responsible for or incorporate CE in their operations (Mwaseba et al., 2010). Examples of these include *inter alia*, SUA Centre for Sustainable Rural Development (SCSRD), the Department of Agricultural Education and Extension (DAEE), the Directorate of Research and Postgraduates Studies (DRPS) and the Consultancy Units. This is coupled by a number of locally and internationally funded CE projects across the university. Nevertheless, in spite of the growing terrain of CE at SUA, the funding allocations have been limited and stagnated. For example, the AICAD (2011) shows that from 1992 to 2000 there have been zero budget allocation for CE at SUA. As such, CE survives on individual efforts and often relies on external funding.

6. Research methodology

Three data collection methods were employed for this study: document analysis, interviews and focus group discussions. Document analysis of three key national policies was conducted. These constituted two higher education policies (National Higher Education Policy (NHEP) of 1999, and Higher Education Development Programmes (HEDP), 2010–2015), and one development policy. Both set of policies were employed to understand the articulation of universities in national, regional and local development through conscious engagement demands. Within SUA, two policy documents were analysed: the University Charter of 2007 and Corporate Strategic Plan (2005–2010). Analysis of these documents was aimed at understanding how the university conceptualises its role in regional development through active and conscious engagement with its immediate and extended community.

Two university administrators in charge of CE, and 15 academic staff involved in CE projects were purposefully sampled for the interviews. One focus group discussion was conducted with fifteen second and third year students from the Department of Agricultural Education and Extension. Students who participated in the focus groups were sampled randomly and based on their availability and willingness to participate in the study. Three CE projects were identified for analysis. These consisted of [Uluguru Mountain Agriculture Development Programme \(UMADEP\)](#), Programme for Agricultural and Natural Resources Transformation for Improved Livelihoods (PANTIL) and [Sokoine University of Agriculture Centre for Sustainable Development \(SCSRD\)](#). These projects were selected for two reasons: (i) they were regarded as “flagship projects”

within the institution and (ii) they have existed for more than 5 years thus were expected to provide adequate and rich information for analysis compared to other projects which had just started.

7. Findings and discussion

In this section, we discuss key findings of the study by responding to the question on how are CE activities interplay with teaching and research and what factors influences such practices. In so doing, we interrogate the application of Boyer’s four dimensions of engagement, which are (i) *discovery* (ii) *teaching* (iii) *integration* and, (iv) *application of knowledge* within the different contextual realities. From the projects reviewed and qualitative data analysed, four key contextual factors emerged as crucial in understanding CE using Boyer’s. These overlapping factors include: policy environment, institutional academic culture, role of incentives and contextual factors.

7.1. Shifting policy context

At the national level, the role of universities in development in Tanzania is somewhat acknowledged within the three policy documents reviewed (NHEP, HEDP and TDV). There seem to be some intentions from the HE and development sectors regarding the role of higher education in national and regional/local development. The Tanzania development vision as enshrined in the TDV is built on the value of education and knowledge as the cornerstone for resource mobilisation for national development. Although the role of universities is not directly mentioned, the TDV stipulates that education and knowledge are critical in mobilising domestic resources and attaining competitiveness in the regional and global economy. The TDV however falls short in outlining ways in which mobilisation and achieving competitiveness should take place.

The NHEP goes further to acknowledge the role of the university in intellectual and human development through its core functions of research, teaching and engagement with the public:

Universities, as . . . institutions dedicated to the professional and intellectual development of mankind and society in general, are expected to concentrate on research, teaching and public service or consultancy ([The United Republic of Tanzania, 1999](#)).

This has recently been echoed in the HEDP which makes a stronger case for the role of universities in technological and economic growth through sustained partnerships. The policy emphasises on HE’s relevance; sustainable partnerships built on knowledge, expertise and facilities sharing and technology for economic growth ([HEDP, 2010–2015](#)).

Though there seem to be a weak expectation of HEIs in development and even higher education policies, the current position should be considered as a step forward if taken into context of earlier research by Bloom, Canning and Chan (2006) for the World Bank. In an analysis of the poverty reduction strategic plans across 22 countries in Africa, (including nine interim PRSPs) all countries except Tanzania made some reference to the role of HE in their PRSPs ([Bloom et al., 2006:8](#)).

SUA, however, through the institutional policies continues to embrace CE one of the three-core functions. The recent mission statement highlights the need to foster development through its core teaching and research functions. The SUA current mission statement reads as follows: “to promote development through training, research and delivery of services” ([SUA, 2014](#)). The current mission may be regarded as an emphasis on the 2007 Charter of the University which states that:

... the University should endeavour to answer the needs and solve the problems of Tanzania's agriculture and rural life, manage natural resources on a sustainable manner and to contribute to improved production and therefore improved living standards of the people (SUA Charter, 2007:14).

In particular, the University Charter of 2007 stipulates outreach as one of the university's core functions (SUA' Charter, 2007). The charter therefore underlines two key areas that resonate well with the idea of CE. These are (i) SUA conducting both basic and applied research in the areas of land use, crop and livestock production, and contribute to sustainable development and poverty alleviation, and (ii) provision of extension services, consultancy and advisory services to the public and private sectors (SUA Charter, 2007). The university has established practical avenues needed to enhance engagement. These include establishment of more centres responsible for CE activities, forged more partnerships with local and international stakeholders, widened the scope, focus and coverage, and attracting more funds from external donors (Mwaseba et al., 2010). Arguably, national level policies demanding universities to engage with communities remain symbolic. Such symbolic policy environment limits the scholarship of engagement as an integral part of the university function. Though, SUA has positioned itself as an engaged university devoted to promoting development within and beyond its vicinity this limited policy expectation expresses itself in the institutional culture of the university and academic.

7.2. Institutional culture of university to CE

Institutional culture in this case includes among other things the understanding of CE and how it is institutionalised in the process of research, teaching and learning. Findings show that CE is conceptualised differently by academics across programmes, departments and faculties. At SUA, CE is most often conceived as an outreach activity which does not necessarily form an integral part of the core function of the university. This is best captured by a senior CE coordinator,

We normally use community outreach or extension, but basically it means the same as community engagement

This conceptualisation of CE as outreach has implications in the nature of engagement. One of such implications is that CE then becomes a service to community and not the community being part of the servicing but rather a recipient from the university. The conception of outreach or extension as providing service to the communities at this university was succinctly expressed by one CE administrator in this statement:

... it is about taking the knowledge and expertise that are within the university to benefit the communities in a direct way, of course we have other indirect ways like training of our staff and students and this does impact on our communities, but when you see community outreach it has been the direct link between SUA staff and communities in the process of transferring knowledge, skills and expertise direct to the communities.

While it is important that universities provide some form of benefit to the communities through its CE activities, conceptualisation of CE as an outreach activity does not support Boyer's model of engagement. In addition, this narrow conceptualisation of CE tends to limit the level of knowledge discovery, integration, teaching and application as communities are not part of the process and hence limited sustainability of the initiatives. van Schalkwyk (2015) argues that this approach to engagement has limited benefits to both the university's (teaching and

research) and communities and makes a short-term contribution to development.

Furthermore there have been limited structures in place to support CE activities. Though centres for outreach have increased across the campus as evident from interviews, there is no central office where all engagement activities are being managed and coordinated. This result in different centres and projects conducting similar research in the communities and subsequently communities become overburdened. This was raised by a number of academics like below:

There has been a lot of debate on restructuring some of these units or centres because they do similar kind of things. We do not have one university arm of coordinating and developing database of what we do in outreach (academic).

Such coordinating unit will also be responsible for measuring and facilitating the rewarding of CE. This has been an observable experience across most universities in Africa as described by Walters and Openjuru (2014:148) that " ... it appears that CE is valued at rhetorical level as it is referenced in [...] university polices, but its translation into practice is often not supported institutionally through high-level senate committees or through dedicated budget allocations". This lack of institutional support was also captured from the data analysis as limited incentives for engagement as discussed next.

7.3. Incentives for CE

The attitude of academics to CE was observed to be affected by a number of incentive structures. Funding emerged as both a motivation and constraint to adequate engagement. The analysis of documents and interviews indicates that due to low salaries and limited government support for engagement activities academics are motivated or driven to engage with diverse stakeholders and government in a bid to secure additional earnings. The AICAD Report (2011) shows that from 1992 to 2000 no funds were allocated for outreach or CE activities.

"funding has been our major challenge the reason is that there is very little money allocated by the university for outreach activities because it gets little from the government".

This lack of funding has, *inter alia*, resulted to a chase after project funding with little attention to the core academic aspects of engagement. This result in the limited level of engagement between academics and the communities, lack of adequate integration of projects into the teaching and research functions of the university and even little publications of these project findings in scientific journals. As summarised by a senior administrator:

CE research has remained at superficial level, mainly focusing on meeting funders' objectives

The priority as indicated by most of the academics is securing external funding. As expressed by one interviewee, "individuals have been very aggressive to look for projects funded from outside knowing that internally is not easy".

Furthermore, emerging from the data is the fact that external funders go a long way in deciding the focus of the research, the scope and even the duration of the project with little or no input from the academics or university management. A respondent involved in a PANTIL project observed:

External funders know what they want and when they send [out] calls for proposals they outline what they want and you cannot write or propose research that is beyond their focus [even if it is something you just finished working on.

This narrow conceptualisation of research or CE activities also affects the extent to which scholarship of teaching and integration is carried out as funders do not very often tolerate outreach activities being used for teaching and learning with community members:

External . . . donors do not want you to apply or even spend time teaching community members although in their documents they say you must engage farmers . . . when you tell them that this is what we have found out lets go and apply it they jump (University academic).

Interestingly, what emerged, partly due to lack of institutional or government funding for engagement and hence dependence on externally funded projects, is the growing trend whereby involvement in CE is primarily motivated by financial gain. While this reflect a macro problem facing HEIs in terms of incentives, externally funded projects were deemed by most academics as lucrative sources of income rather than part of social contribution and scholarly work. While this seems to deviate from Boyer's conceptualisation of engagement, it must however be observed that the low salaries of most academics in Africa also present survival challenges of their own, hence the high brain drain and low knowledge production:

We are squeezed into a financial syndrome, what we get surely is too minimal, so I have seen cases of staff changing from one commissioned or consultancy research to another depending on where they get more money because if you just rely on the little salary that you get from teaching alone it's difficult to make it in 30 days (University academic).

Though Tanzanian academics earn much more than their peers in some African higher education systems, they also clearly earn much less compared to international rates. For example, on average, the monthly salary of a professor in Tanzanian public universities is equivalent to US\$ 3200, compared to US\$ 3500 in South Africa, US\$ 7358 in the US and US\$ 9485 in the UK (Kisero, 2012). Weerts and Sandmann (2008) found similar patterns in some Land grant universities where in most cases, faculty [academics] got involved with engagement projects if doing so yielded monetary rewards and special recognition or if it enhanced their teaching or research. van Schalkwyk (2015) observes that in sub-Saharan Africa, in a context of relatively underpaid and poorly incentivised permanent academic staff, engagement is often synonymous with consulting work, mainly for the pursuit of monetary rewards. Besides the financial challenges facing academic staffs, contextual realities also prevail.

7.4. Contextual realities

The form of CE engagement as highlighted in section two is affected by the contextual realities between the university and its community. SUA is located in an area that is relatively underdeveloped with communities' main activities being subsistence farming (hand-hoe farming, fishing, bee and livestock keeping). These activities play a major role in the ways in which CE is design and implemented at the university. For example in all three CE projects reviewed, there is a perceived dominance of participatory action research (PAR) and community-based research (CBR). Although in most cases CE is associated with these research approaches, (Creighton, 2006), in our case study PAR and CBR were undertaken in order to align with the local realities. A CE administrator reasons: "there is very little demand of scientific innovation, advanced knowledge or technologies with the communities". In elaborating further, a senior academic involved in SCSR project and one student commented that:

We use participatory action approach because of the nature of farmers we engage with. They are traditional small scale

farmers. So that has made us find approaches that suit their conditions. So we package knowledge from the university, mobilise the community members and allow them to drive the research process, if you don't do that you will be doing obsolete things which do not benefit communities

Most of the farmers we deal with are not financially capable to afford the demands of the knowledge we share with them and sometimes they do not see any value because of what they have been practicing for years (Student respondent)

The above limitation coincided with what students identified as the communities' 'language and traditional value systems'. These two aspects present challenges in communicating and reconciling values. This perceived difference in language and value systems and the relative short periods of time academics spend in the community's limits levels of trust between academics and farmers. Hence application of the scientific knowledge is limited as is perceived as contradictory to traditional or indigenous knowledge which has been passed down through generations. One student emphasises that:

It is difficult to involve [engage] with farmers as they see us as being different from them because we come from the university, so we have to become friends, learn what they do and what they want, help them when they need help, so it is not only about special project but also being with them, knowing how to deal with their challenges, what they do and their main problems (Focus group discussion,)

Context remains a crucial aspect in the application of Boyer's model of engagement. Universities and academics have the responsibility to leverage engagement depending on their various contextual realities.

8. Implications of the study: Navigating an unbalanced Boyer's Model

Boyer's framework of CE emerged partly as a counterweight to the prominence of research in the 20th century, which saw little attention being given to other functions of teaching and direct engagement with communities (Roper and Hirth, 2005). Central to Boyer's work was the search for a new definition of what it means to be a scholar as well as the priorities of the professoriate (Boyer, 1990). As such, Boyer developed a model that would combine and reinforce research, teaching and service. The literature of CE as discussed by Boyer present a model arguably balanced out by the activities of each of the four scholarship elements: teaching, discovery, application and integration. In fact, the model to a large extent reflects what Clark (1983) refers to as the 'main technologies' of the university. Notwithstanding the popularity and importance of Boyer's model in elevating CE as scholarly endeavours, two contextual differences could account for some of the divergences between Boyer's model and the findings from SUA.

- (i) the difference in academic earnings and lack of adequate incentives for engagement, and
- (ii) limited absorptive capacity of the region "... which strongly conditions the quality of knowledge transfer from university" (Bramwell and Wolfe, 2008:1177).

Also drawing from the literature and juxtaposing Boyer's model in respect of our findings, we argue that the terrain of higher education around the globe has shifted significantly since the release of Boyer's framework of engagement. There are two

changes that seem to be relevant to our case study. These include the ongoing dominance of neo-liberal policy in universities and the changing demands of 21st society. These changes ignite the need to rethink about Boyer's model and more broadly today's CE practices.

Using findings from SUA and Tanzania more broadly, on one hand we see that the effects of neo-liberal is strongly creeping on higher education in terms of competition, funding cut backs leading into the rise of new model of survival for both universities and academics. At issue in general is how SUA case suggest that the thinking around and practices of CE have to a large extent shifted from being seen as merely voluntary and do good to a more instrumentalism way of engaging with local milieu. In essence, we see more of unbundled CE practice, which divert from a more inclusive view of what it means to be a scholar as espoused by Boyer (Chantler, 2014). The findings from SUA heighten the need to re-imagine Boyer's framework of CE in relation to: (i) the current conditions in which universities operate, and (ii) the kind of CE activities that might reinvigorate Boyer's idea of the academy in an increasingly complex global society.

On the other hand, universities are practicing CE in an era of increasing economic, social, political, and technological demands. These evolving spheres have made CE to be approached in different ways over time and space. Our case study seems to support the evolution of CE in respect of changes taking place in the broader society. SUA's findings suggest that due to transformations in society there is no clear cut ways of achieving all four domains of CE as proposed by Boyer. For example, through consultancy services, commissioned research and action research, academics could potentially generate and apply knowledge and teach others. In advancing Boyer's work, Hyman et al. (2001:41) make similar comment that "the twenty-first century presents major challenges and increase opportunities for academic scholarship". Broadly, the authors emphasis on problem solving, observation, advising as well as expert consultation which enhance the intersection of service in this case CE and discovery, application, and teaching. The multiple forms of CE observed from SUA speak to some of the commonalities existing across sub-Saharan region. For example, a study conducted by Preece et al. (2012) in countries such as Malawi, Ghana, Uganda, Botswana, Nigeria, Tanzania, Lesotho found that CE practices share a common characteristic and can be divided into different typologies. Most significantly, Preece and colleagues point out similar challenges such as misconception about terminology of community and engagement, poor experience of unrealised partnership, increasing emphasis on quality and competitiveness among and between HEIs, overemphasis on teaching and research, cutbacks in funding and prevailing culture of not rewarding academic for engagement work.

Therefore, in order to have CE that is foregrounded within Boyer's framework there are pre-conditions, which engagement policy and practices at national and institutional level need to take into consideration.

First, the role of HE and universities needs to be firmly established in national and regional development policies by both the government and HE sector. Such a role has been clearly captured in African HE vision at the recently concluded African HE summit in Senegal which is to "develop a high quality, massive, vibrant, diverse, differentiated, innovative, autonomous and socially responsible sector ... able to produce the human capital [and knowledge] required for the continent's inclusive and sustainable development, democratic citizenship ...". (AAU, 2015:2–3).

Second, the institutional and academic culture of academics remains critical for sustained engagement. Findings show that contrary to Boyer's model, CE at SUA is perceived more of an

outreach activity shallowly embedded within the core functions of the university. In Preece et al., (2012) view CE is undertaken with the philanthropic mode, focusing on doing good and service provide to the community needs. Though Boyer connects scholarship of application to service or outreach, he emphasises that these services or outreach are "tied directly to one's special field of knowledge and relates to, and flow directly out of this professional activity" (Boyer, 1990:22). Furthermore, research projects seem not to adequately apply the scholarship of integration as observed in two ways. First is the fact that most projects are conceived by the funders or donors with limited input from community. Regarding the scholarship of application, Boyer had in mind "the intersection between the interest of the scholarship and those of society and an application of knowledge stimulated by both" (Boyer, 1990:21). Second, the quick turnover of projects by academics in search of more funding also limits the scholarship of application as less time is spent thinking about application of some of the new knowledge. The above two points around scholarships of discovery and application relate to the last point which is the role of context.

Third, there need to be strong alignment between CE and research, which in turn enhance application and teaching. Drawing on our case study CE is built around imbalanced elements of scholarships espoused by Boyer. With the argument that a 'scholarly engagement' focuses on knowledge generation and integration (Preece et al., 2012), research should be an integral part of CE and CE ought to provide space for knowledge application whilst allowing academics to feedback into teaching endeavours.

Fourth, equitable engagement centred on mutuality and reciprocity should form the basis of CE implementation. What transpires from SUA is limited two-way exchange of knowledge among CE partners (academics, students and community members). While the approach to and motives for undertaking elevates the university as benefactor, external communities also seem to embrace the fact that through CE the university solve the challenges and meet their needs. This perhaps confirms the shift from scholarly engagement where the university work with the communities in producing knowledge to a more instrumentalist approach.

9. Conclusion

The role of universities in local, regional and national development remains vital within the knowledge economy discourse. While the conceptualisation of how this takes place remains contested, Boyer (1990, 1996) provides a possible model for universities CE. Though conceptualised within a more developed context, Boyer's model through its four dimensions of scholarship provides guidelines for engagement which does elevate both core functions of the university and the knowledge and resources embedded within communities. Application of such a model in different contexts will need to carefully account for the contextual realities at play within the HE system and beyond.

From the Tanzanian case study, as demonstrated in this paper, it was observed that the role of universities in national and regional/local development is beginning to be recognised within the development and HE policies. However, the implications of such recognition remain elusive. Established with such a mandate, the Sokoine University of Agriculture has positioned itself within the region as an agent for development and socio-economic transformation through a number of policies and engagement initiatives. However, contextual challenges abound. There is clearly lack of coordination and incentive structures for academics while the region does not have the knowledge threshold to apply knowledge.

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