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Addressing Sustainability Planning in Higher Education Research

Hope Pius Nudzor

Abstract

In recent times, the term “sustainability” has come to gain significant popularity in policy-oriented research and has become part of our everyday lexis in higher education research. Yet, in an attempt to deal with the issue of sustainability planning in research project proposals, the term has been conceptualized to refer solely to financial sustainability as if to say other types of sustainability either do not exist or do not matter. This chapter addresses this issue of sustainability planning in higher education research. In the process, financial sustainability is elucidated, and through that two other categories/types of sustainability are identified and discussed crisply for rumination. Following up on this, steps to sustainability planning are outlined to set in context the contention of the chapter that sustainability planning in research project management requires long term planning to facilitate diverse donor engagements and for improving institutional capacity of target populations. Thereafter, and using an example of a research proposal which responds to Open Call for project proposals for funding from a renowned multilateral funding agency, the chapter exemplifies how sustainability planning in research project proposals can be addressed to help strengthen the proposals to attract research funding from potential donors.

Keywords: sustainability planning, project management, financial sustainability, institutional sustainability, programmatic sustainability, higher education

1. Introduction

In recent times, the term “sustainability,” a word frequently used across several disciplines, has gained significant popularity in policy-oriented research and other social sectors of development, and consequently has become part of our everyday lexis in higher education research. Looking from the lenses of donors and NGO’s, it is the most sorted feature nowadays to ensure success to a project venture. Historically, the origin of the word “sustain” dates back several centuries, from two Latin words *sus* which means “up” and *tenere* meaning “to hold.” So literally the word “sustain” means “to hold up,” although in its current use implies something that continues for a long time. In its current usage, and in research project management sense, sustainability simply is the ability of an organization or research project team to continue its mission or programme of activities far into the future. Looking at sustainability from an organizational point of view, it means continuing to

perform and deliver project benefits to the primary target group after the funding from a donor(s) terminate [1–3]. In other words, sustainability is to maintain and continue your efforts as an organization and/or project management/implementation team after the funding for such activities is over.

Underscoring sustainability planning in research project management¹ principally is the view that all projects have to come to an end eventually at some point, but project impact should continue to be delivered for a considerable length of time [2, 4, 5]. Essentially, project donors want to see how project impacts will outlive their (i.e. donors') direct involvement and inputs. This thus makes sustainability planning a key feature of project management practice. In this sense, typically, research project sustainability simply implies the continuation of the research project activities and sustenance of research project outcomes after the initial/primary grant expires. For this reason therefore, most donors are concerned about sustainability aspect of research projects and often fund projects which have a well-defined and/or comprehensive sustainability plans in place [4, 6, 7]. Besides, it is often a challenge for most organizations to ensure a steady flow of funds for executing their projects and programmes. Integrating sustainability principles in their ongoing projects can therefore be an effective way to ensure long term impact.

From a theoretical standpoint, this idea of project impact sustenance holds relevant for all organizations and institutions of higher learning to prevent them from having “donor-driven visions” [2]. However, in practice, the preponderance of available research evidence, particularly from Development and Project Management literature, identifies lack of sustainability planning as one major challenge that has plagued (and continues to plague) research project implementation and management efforts of countries, particularly those in sub-Saharan Africa. In many of these countries, new policy initiatives are not adopted nationwide and sustained after donor-funded projects end. In Ghana as a case in point, new initiatives recede after funding stops, particularly as most funding for projects come from donors [8, 9]. Consequently, the term “sustainability,” at least in research project management sense, has come, all of a sudden, to gain enormous popularity and significance in policy-oriented research, and has become part of our everyday lexis in higher education research. Yet, in attempting to address the issue, sustainability planning, particularly in research project proposals, has been approached and conceptualized by many to refer solely to financial sustainability, as if to say other categories and/or types of sustainability either do not exist or do not matter.

This chapter addresses this issue of sustainability planning in higher education research. In the process, financial sustainability is elucidated, and through that two other categories/types of sustainability are identified and discussed crisply for rumination. Following up on this, steps to sustainability planning are outlined to set in context the contention of the chapter that sustainability planning in research project management in higher education requires long term planning to facilitate diverse donor engagements and for improving institutional capacity of target populations. Thereafter, and using an example of a research proposal which responds to Open Call for project proposals for funding from a renowned

¹ Sustainability planning and project management, as used in this article, have different meanings. Project management is used in this article to denote the step-by-step process for planning, organizing and managing projects. It involves the practice of initiating, planning, organizing, executing, controlling, and closing the work of a team to achieve specific goals and meet specific success criteria at the specified time. Sustainability planning, on the other hand, is used to depict that aspect of project management that ensures that project activities are planned and executed in such ways that make it possible for project impacts to continue to be delivered and sustained even after the project cycle elapses.

multilateral funding agency, the chapter exemplifies how sustainability planning in research project proposals can be addressed to help strengthen the proposals to attract research funding from potential donors. Essentially, the chapter argues that sustainability planning in higher education research is important in as it prepares higher education institutions to deliver positive outcomes in the absence of primary funding.

2. Addressing financial sustainability in research project management

Integrating sustainability principles in research project proposals is an effective way to convince donors about the long term impacts of one's project activities. However, as was stated earlier, attempts by many prospective research funds applicants to demonstrate to funders or donor agencies how their proposals would continue after project funding ends appear to focus solely on the issues of finances. Admittedly, financial sustainability is of paramount importance as far as project management and sustenance are concerned. It is the pivot around which sustainability as a concept oscillates. However, as would be elucidated in this article, donor agencies look at other equally important aspects of sustainability to assure and/or satisfy themselves that such research projects will continue to deliver long term impacts in terms of benefits to the target community even after the grants expire.

So what is financial sustainability, and how can it be assured and sustained by a research project proposal in the long term? Financial sustainability simply refers how the financial support required for the project activities of an organization or research project team will continue after funding, mostly in the form of grants, have ended. It refers to ensuring a steady flow of funds and generating revenue for maintaining and continuing project activities with the view to providing project impacts to stakeholders or target groups, at least for a considerable length of time [2, 3, 10]. The financial sustainability process itself involves essentially developing a financial plan outlining the various options available for expanding the resource stream of the organization or research project. This may require undertaking research to understand the "terrain" and the various options that can be used to maintain a steady flow of funds. Efforts at this stage also help in knowing potential donors and understanding their priority areas of funding.

Plans to sustain research project activities financially in higher education institutions take many and varied forms [2, 3]. Broadly speaking, financial sustainability activities are planned in such ways that the research projects themselves generate financial gains or profits and continue to function on earned income even after the funding timeframe elapses. Some of the common "business" sustainability measures and/or options that are used, particularly in the case of research project proposals to donors, according to Leon [2] include:

- **Sale of product:** This entails outlining clearly plans to sell products that the organization or research project team will produce in the open market. Although viable, this may not generate huge returns. Nonetheless, this can help the project team continue its efforts to deliver project impact for a while.
- **Diversifying donors:** This involves looking not and identifying a single funding source, but spreading ones tentacles to include funding agencies in related fields, including from corporate organizations, local institutions, individuals etc. Several studies (e.g. [11, 12], etc.) show that sustainability increases when projects have multiple sources of funding.

- **Charging service Fees:** This entails making plans to commence charging nominal fees from the target beneficiaries for the maintenance and functioning of the project once funding of project activities comes to an end.
- **Charging membership fees:** This is about plans to charge annual fees from all beneficiary groups of the project's impact in order to get project plans and activities to continue. This may be a small amount but can help continue some of the project activities as the project team explores other options.
- **Undertaking online Fundraising:** Online fundraising is one sure way of reaching out to a wide audience and individuals who have interest in the project to support project activities. It involves soliciting for funds basically online to support the continuation of project activities.
- **In Kind donations:** This involves soliciting for support, other than financial resources from agencies and individuals to sustain some of the project activities. This is especially the case where the agencies or individuals do not have the "financial muscle" to support the project activities but can render their services, platforms or physical recourses for use by the project team.
- **Undertaking annual/periodic appeal for funds:** This mainly take the form of annual or periodic appeals rendered to agencies and individuals to make financial donations towards sustaining project activities.
- **Adopting environmental sustainability approaches:** These approaches involve the use of project resources in such a way that the needed resources never disappear. It is instructive to note, however, that environmental sustainability approaches, most often, are project themes or cross-cutting themes within larger projects.

So while financial sustainability options take varied forms as illustrated, it is not to be taken or assumed in the least that they operate mutually exclusively. Most often, multiple financial sustainability options with practical and viable potencies are the ones that serve to convince donors that an organization can really deliver positive outcomes in the absence of primary funding. A good financial sustainability strategy to exemplify this point is a situation in which a research project team is able to, for example, demonstrate in their research project proposal, plans to ensure that paid up members of an organization receive a set of services (which include a regular newsletter, information on best practices, policy and regulatory advocacy and participation in annual conference), while at the same time making plans in the proposal to raise funds as well as provide specialized, accredited courses, information searches, published sectoral information and professional advisory services for fees which will be paid for by members and external agents.

3. Other categories/types of sustainability in research project management

The other categories or types of sustainability exemplified in the research project management and development literature vary significantly, but share some similar underlying characteristics with one another. For this reason, and in order not to sound repetitive, I focus on two other types of sustainability (i.e. aside financial sustainability) namely: institutional or organizational sustainability and

programmatic sustainability [6, 10, 13, 14] to drive home the argument of the chapter that there are different aspects of sustainability that are to be considered while writing the sustainability plan, particularly for research project proposals seeking to elicit funding from donors for project activities.²

Succinctly defined, institutional or organizational sustainability refers to ways of ensuring proper working of the organization and its institutions that were developed as part of the project even after the period of funding elapses, [6, 13, 15, 16], whereas programmatic sustainability means to continue the organization or project's programme of deliverables in the absence of donor support [10, 14, 17].

So clearly, both of these definitions show that aside finances, project proposals (especially those seeking for funding from donors) ought to demonstrate how project teams and the organizations and/or institutions they represent as well as project activities and programmes would continue to exist and deliver required impacts even after primary funding from donors recede or dry out completely. The argument this chapter presents essentially is that the combination of these three categories/types of sustainability (i.e. financial, organizational or institutional and programmatic sustainability) builds a comprehensive suite of support services and materials for research project teams that wish to undertake sustainability to effect lasting project impacts and benefits on their beneficiary constituencies.

Although from a glance organizational/institutional and programmatic categories of sustainability may appear quite similar in terms of the focus on ensuring the continued existence of the project team (and the organizations and/or institutions from which the team is formed) as well as their programmes and activities, their approaches to planning sustainability differ markedly. In the case of institutional and/or organizational sustainability, the following are examples of the methods that can or are most often employed to demonstrate its sustainability in research project proposals:

- **Exploring new opportunities:** This involves demonstrating within the proposal a flexible approach to undertaking project activities while looking for new opportunities to exploit in order to ensure continued existence of the project. This also entails the readiness expressed in the proposal to modify priorities to fall in line with unforeseen changes that may occur in the course of implementing project activities. A number of studies (e.g. [7, 18, 19] etc.) show that the ability of a project to change in accord with changing circumstances can significantly affect its chances of survival positively.
- **Developing new partnerships:** Developing a sustainable organization demands developing new partnerships. These partnerships, when indicated clearly in the project proposal, are helpful as they show the foresight of the project team regarding how stable the project will be and how they intend to take their mission ahead into the future ([18, 20] etc.).
- **Boosting existing relations:** Along with investing time and energy on developing new partnerships it is equally important to indicate clearly in the proposal how or ways by which existing relations with donors, stakeholders and beneficiaries will be managed in a proper way. This is essential as it is these relationships that are going to take activities of the project into the future and sustain them [11, 12, 21].

² So clearly, the focus of this chapter is on sustainability planning for research project proposals development in higher education research to convince donors to fund project activities, and not necessarily on sustainability planning for project management per se.

- **Undertaking communications and outreach activities:** A good project proposal with the potential to attract funding from donors is one that has a well-crafted organizational/institutional sustainability plan with a strong communication strategy. This makes it clear how the project team intends to showcase project results to a large audience [4, 20, 22]. A good practice is to have a monthly communication plan within the proposal that can be used for updating your webpage, social media profile, sending donor mails etc.
- **Engaging volunteers:** One of the strategies that many project teams use to indicate in their proposals their plans to sustain their projects in the long term is through engaging volunteers for performing specific activities. As volunteers do not draw salaries directly from organizations, they are a good source of resource to be used to continue the mission of project activities without spending much money [7].

Programmatic sustainability, on the other hand, is ensured through a different set of activities including, but not limited to:

- **Community involvement:** Involving communities in some aspects of project activities is key to having long term impacts from projects. One way, therefore, by which project teams ensure that they address programmatic sustainability is by ensuring that their proposals involve communities at various stages of projects [4, 7, 13, 18–21, 23]. This indicates to donors the communities' ownership of the project even after the project duration. Also, the entire process of participation is participatory, and also has the added advantage of indicating how the skills and knowledge to be gained by the present group of people within the communities will be transferable and also replicable to or with "others" within the community of beneficiaries.
- **Institutionalize local groups:** Local groups play a very important role in maintaining programme objectives. For this reason, one way of ensuring programmatic sustainability in project proposals is by indicating plans to strengthen local institutions and involve them in the planning and implementation phases of projects [4, 20].
- **Community advocacy:** Indicating plans to sensitize communities about benefits of a particular project and initiating a policy advocacy plans within project proposals is also an effective way to ensure programmatic sustainability in the long run. The assumption here is that once the communities have been sensitized and incentivized enough to have buy in, they embrace and follow through with project activities even after the project duration [4, 11, 12, 17, 21].
- **Involving local government and departments:** Making clear plans in project proposals to involve of local agencies and government also ensures improved access to the government initiatives in this direction. The point is that as these local government agencies and departments are permanent, they help in sustaining project activities beyond the project duration [7, 13, 19, 22, 24, 25].

So clearly, although organizations (including research project teams) need financial muscle to move their activities and programmes ahead, as is being echoed here by the chapter, none of the three categories of sustainability (i.e. financial, organizational or institutional and programmatic sustainability) exemplified takes or should take pre-eminence over the other as far as project proposals seeking funds

from donors are concerned. Rather, it is the combination of all three that builds a comprehensive suite of support services and materials for project teams that wish to undertake sustainability to effect lasting project impacts and benefits on their beneficiary constituencies.

4. Steps in sustainability planning

In practice, sustainability planning outlives research project proposal development and submission processes as it requires long term planning to facilitate diverse donor engagement and for improving institutional capacity of target populations. As such, it is always advised that great pains should be taken to discuss among members of the organization (including research project team members) the various processes and mechanisms to utilize even at the proposal development stage of project activities. Admittedly, and as a result of the strenuous processes, involved, views regarding steps to sustainability planning in the project management and development literature necessarily do not converge [3]. This notwithstanding, the following four suggested practical steps are most useful in guiding the discussion, planning and implementation processes of sustainability planning, particularly in higher education research.

4.1 Step one: understanding your organization

The key to sustainability planning in project management is understanding one's own organization and having long term vision for it. As Director/MD/CEO, management, board or staff, of an organization, everyone, as the first step towards sustainability, should be familiar with the organization and have a clear picture of where they expect to see their organization after a period of 5 or 10 years. This ability to understand and envision the future of one's organization in the long term serves to get the entire organization to think thoroughly about "what" to do and "how" to do the "what" to get the organization to become sustainable in terms of its programme of activities, impacts and resources [5, 15]. Once the long term vision is known to members, the various things required to achieve sustainability could then be easily drafted. Having attained this, and with the use of data and facts, members of the organization are then enabled to explain to the donor(s) about the long term goal(s) of their organization and the processes, resources required to ensure it becomes sustainable in the long term.

4.2 Step two: getting the organization ready for sustainability

Once members of the organization have understanding and could envision the future of their organization, the next task towards sustainability is getting ready for sustainability. The assumption essentially here is that in order for organizations to start the transition towards sustainability, they need to be strong enough to manage change [4, 5]. As such, activities at this stage involve gauging the readiness of the organization for sustainability using sustainability assessment tools. These tools take the organization through a detailed examination of its current efficiency and performance across all its activities and management processes. Of paramount importance at this stage is to ensure that the assessment is conducted as an organization wide process, with everyone (e.g. staff, management and board) fully involved, rather than a Director/MD/CEO conducting the assessment in isolation ([4, 5, 18] etc.). In this way, the whole team builds consensus on strengths and areas for learning and strengthening. Also, it is helpful at this stage to focus on helping

the organization to recognize the difference between practices that “maintain” and those which “sustain” an organization. Often, good practices may already be in place. However, with a completely different understanding of sustainability owing to activities at this stage, the organizations can readily enhance its practices and performance [4, 18]. The sustainability assessment may, for example, reveal that the organization is ready to implement a sustainability strategy or there may be areas where strengthening or additional capacity may be required, and this gives the entire organization an opportunity to come together and jointly agree on the optimal ways to move forward. Again, it is vital that leadership and staff work together to build these organizational foundations and prepare as a team for the new journey.

4.3 Step three: planning for sustainability

The next exciting stage after the necessary preparatory activities is to start planning for sustainability. The activities at this stage include providing staff and stakeholders training to support strategic planning skills, knowledge of needs assessment and logic model construction, leadership skills and fundraising expertise [7, 15, 18, 22]. Owing to the activity-oriented nature of operations at this stage, peer relationships and support networks are encouraged, which the organization can continue and retain for shared learning in the long term. These help to create the opportunity for members of the organization to plan their sustainability strategies, generate a supportive atmosphere where participants can share, learn and plan jointly, and build supportive relationships that allow the organization to compare learning and winning strategies as they work alongside each other. The activities here also help to introduce members to new skill sets and ways of thinking and realizing sustainability.

Six key activities are undertaken as part of the planning process [3]. These include: integrating sustainability aspects into project activities [13, 19]; developing communication and outreach strategy; involving key stakeholders in programmes development [4, 20, 22]; diversifying funding sources [11, 12]; creating inventory of resources [5, 15]; and using donor databases [11, 12, 15]. Concerning integration of sustainability aspects into programme of activities, it is always advisable to integrate sustainability aspects in projects right from the beginning as this helps to develop partnerships and relations with relevant stakeholders at an early stage of project development. This also ensures that once the primary funding for project activities terminates the organization has a strong support to continue its activities into the future. In a similar vein, developing a strong communication strategy is essential at this stage to achieve three key purposes. First, to ensure that project results can be shared with a large audience. Second, to ensure that the organization puts in place a well-documented project results that helps in getting support from a range of stakeholders and donors. Third, this serves to avoid last minute rush of donor search.

Another major step towards sustainability planning at this stage, and as intimated earlier, is stakeholder involvement in programme development. This can be done in several ways, but as part of the project planning activities, a multi-stakeholder dialog workshop can be initiated to seek the involvement and participation of relevant people and agencies in the programme of activities of the organization. Stakeholder involvement and participation is key in maintaining, sustaining and institutionalizing the organization’s missions, programme objectives and operations. The most important aspect of planning for sustainability at this stage is to diversify the organization’s funding sources or donor-base, and to develop long term partnerships with donors to support the organization’s activities. As the success of the organization at securing financial sustainability, for example, depends on partnerships developed with corporate organizations, local institutions

and individuals, the advice always is not to focus on traditional donor agencies but explore new opportunities as well. Another useful way to plan for sustainability, particularly at this stage is to create and keep an inventory of all physical, material and human resources that the organization can make use of after its activities or project ends. This helps the organization to know in advance the resources it would need moving into the future. In this way, the organization gets to use some devices and equipment (such as training modules, camera, recorder, furniture for a school etc.) purchased during specific programme of activities even after the grant for such activities expire. Lastly, and on the part of using donor databases as an activity in sustainability planning, the advice always has been to enlist a few donors from the organization's donor database who are likely to fund its project or programme of activities and to keep in touch with such agencies so that they are aware about the organization's existence and its activities.

4.4 Step four: implementing the sustainability plan

Once the organization is able to develop, finalize and assess its sustainability plans, the next step is for it to commence implementation of its sustainability plan. The essence of finalizing and assessing the plans before commencing implementation is to allow for decisions and/or arrangements for technical support for implementation that probably may be needed. But essentially, the activities at this stage in the sustainability planning process involves putting into use or implementing the plans developed to ensure that an organization's mission, programmes of activities and resources continue to exist after its funding regimes elapse. In practice, it is a generally acceptable practice for an organization's sustainability plan to outlive or transcend project proposal development and submission processes. This is particularly the case since the organization may well commence implementation of its sustainability plans even before a proposal is developed to source funding from donor agencies to get or keep its operations sustainable.

In sum, it needs to be foregrounded that while the illustration in this article treats sustainability planning in the form of steps, it is not to be considered that the approach is compartmentalized into discrete components or stages. The processes and steps involved in sustainability planning are fluid and therefore in practice flow easily into each other.

5. Addressing sustainability planning in research project proposals: an exemplar

In this section, sustainability planning in research project proposal development in higher education research is exemplified. This is done to drive home forcefully the thesis of the chapter that ensuring project sustainability requires more than addressing financial sustainability alone, and that donors look at critically, scrutinize and fund proposals on the basis of how they address financial sustainability vis-à-vis other different but equally important aspects of sustainability to ensure that these projects continue to exist to deliver required impacts even after primary funding from donors recede or dry out completely. To be able to do this, excerpts from a research project proposal submitted recently in responds to an Open Call for project proposals for funding from a renowned multilateral funding agency is drawn upon for purposes of exemplification. For purposes of succinctness of presentation, the issues to be presented are dealt with under three sub-headings, namely: information about the Open Call for proposals; addressing the development challenge and impact of the proposed African Centre of Excellence for

Educational Leadership and Teacher Training (ACE-ELTT); and outlining the sustainability plan for the proposed ACE-ELTT project.³

5.1 Information about the open call for proposals

The Africa Centres of Excellence for Development Impact (ACE Impact) project is an initiative of the World Bank which is being implemented through/by the Association of African Universities (AAU) to, among other things, improve the quality, quantity and development impact of postgraduate education (defined to include Master's and PhD degrees, and short term professional level courses and training) in selected universities in Africa through regional specialization and collaboration [26]. Each ACE Impact Centre proposed for funding is expected to identify an aspect of a developmental challenge (i.e. relative its host institution and country) that can be addressed with an integrated programme of work that is achievable over the period of four and half years project duration.

The ACE Impact project consists of three components, namely: establishing new and scaling-up well-performing existing ACEs for development impact; fostering regional partnerships for emerging centres and regional scholarships; and enhancing regional project facilitation, and monitoring and evaluation. This Call for Proposals, to which our research project team responded with a project proposal, is focused on the first of three components (i.e. establishing new and scaling-up well-performing existing ACEs for development impact).

As indicated in the Guidance Notes for the Open Call for proposals [26], Component 1 aims to build and strengthen the capacity of competitively selected ACE centres based in higher education institutions across West and Central Africa. To this end, each ACE centre is expected to address a regional development challenge through: higher quality postgraduate education addressing the skills gap and tackling priority applied research questions; leading regional education networks; and delivering short-term courses. In consultation with stakeholders, the centre are to update and/or launch new postgraduate degree programmes that are accredited to meet international high-quality standards. The centres are also expected to offer curricula that ensure that their students have the demanded competences upon graduating from their degree programmes, including analytical, digital, and entrepreneurial competencies.

According to the Guidance Notes for writing up proposals attached to the Open Call [26], partnerships with national, regional and global sectoral stakeholders (i.e. private enterprise, including but not limited to, multinational, regional, national or local enterprises; Ministries and other public authorities; chambers of commerce; trade groups and professional associations; hospitals; policymakers; and other appropriate stakeholders) and academic institutions will ensure that the ACEs focus their activities on the education and research needs to solve specific problems associated with the targeted development challenge. Centres are expected to disseminate their research findings to policymakers and companies, as well as through international peer reviewed journals. Further, each Centre, according to the guidance notes, will be required to have policies backed by specific interventions in place to: (a) increase the number of females within their student body, faculty and academic leadership; and (b) ensure the overall well-being of their student population. Under this project, the Guidance Note adds, greater emphasis will be placed

³ The research proposal described in this chapter passed all the assessment evaluations for funding, and was particularly hailed by assessors for its sustainability strategies outlined. That notwithstanding, it is instructive to concede that the project was not funded eventually owing to infrastructural lapses on the part of UCC to house the ACE-ELTT to support project activities.

on ensuring ACE host institutions are incentivized to undertake several activities, including those which promote good governance; data collection and management; and regionalization of their institutions, that is, taking steps to make their institutions regionally (and ultimately globally) competitive [26].

Overall, the expected results of the proposed project include:

- increase in number of students, in particularly regional and female, enrolled and graduating from Master's and PhD programmes;
- improvement in the quality of programmes including an increase in the number of programmes (and ACE host institutions) that obtain international accreditation;
- development impact attributable to the project, including improvement in the relevance of the education/training programmes and of the applied research evident through:
- increase in the number, and strength, of sectoral partnerships that lead to production and hiring of high-performing graduates, internships for students, application and commercialization of research results, advisory board participation, etc.
- increase in the amount of externally generated revenue, including from companies and other sectoral partners [26].

Thus briefly, it is against this background that the research proposal being described in the context of this chapter was developed and submitted in response to the Open Call for funding to establish ACE to address a pertinent developmental challenge facing Ghana, and by extension, West Africa and sub-Saharan Africa region as a whole.

5.2 Identifying and addressing the development challenge and impact of proposed ACE-ELTT

Literacy, Science, Technology and Mathematics Education and Leadership constitute a key to the socio-economic development of every nation. Knowledge in these five subject areas is critical for industrialization of Ghana and other sub-Saharan African countries that share similar characteristics as Ghana. It is for this reason that past and present governments of Ghana, for example, have identified and channeled (and still continue to channel) a lot of resources into Literacy, Science, Technology and Mathematics Education. These areas put together have been considered as one of the pillars for the development of the nation. However, learning outcomes in these critical areas remain critically low, resulting in high population of people who are semi-illiterate and have very little knowledge in basic science and mathematics. This situation contributes to low industrial productivity, poor sanitation, high levels of crime and eventually poverty within the Ghanaian society.

This developmental challenge could be attributed to a number of significant gaps in the Ghanaian education system. Some of the gaps include poor orientation and exposure of pre-service teachers to pedagogical approaches that draw on students' socio-cultural background to enable them understand school concepts. They also bring about institutional weaknesses in training effective and reflective teachers. These disparities equally affect leadership for learning and the training of well qualified teacher educators, especially in the areas of literacy, science,

mathematics, and technology. Other gaps include the low level integration of new technologies and approaches into teaching and learning in training institutions; the disconnect between learning outcomes and gender balance among students as well as staff in teacher education and leadership institutions; and the limited opportunities for professional development for educators (tutors and lecturers) in teacher training institutions to develop their pedagogical and professional and leadership skills.

Currently, there is no specialist training programme in pedagogy for tutors/lecturers who handle Literacy, Science, Technology and Mathematics at the Colleges of Education and Universities running Teacher Education programmes in Ghana. Many of the educators who teach courses in pedagogy are those who took a few courses in pedagogy as part of their graduate programmes and therefore do not have in-depth knowledge in the area. Consequently, many of the teacher educators have limited ability to connect their leadership skills to the actual learning of students in within the classroom setting. Presently, a number of educational institutions have been established in Ghana and are mandated to undertake capacity building functions. However, efforts to assist teacher educators to connect their leadership skills and dispositions to actual learning of students in classrooms appear to be fragmented, incoherent and dysfunctional.

To address the above challenges, we propose the establishment of the, ACE-ELTT, and seek to mount academic programmes and engage in vigorous enrolment drive in postgraduate studies in educational leadership and teacher training to improve teaching and learning in Ghana and Africa. This, we believe, will go a long way to enhance global recognition and visibility of ACE-ELTT as a Centre of excellence for educational leadership and pedagogy training for teachers in literacy, science, mathematics and technology. The education, teaching and learning activities at the Centre will include teaching with modules and internship. The teaching with modules will involve classroom work, laboratory work and practicum. For the internship, the Centre will set up an Outreach Unit to be coordinated by a senior and experienced academic who has the passion for professional development to superintend over the unit. The Outreach Unit will support students and candidates on placement decisions and place them as interns at pre-agreed institutions that have a working relationship with the Centre. The ACE-ELTT Centre's priority domains of Educational Programme are pedagogical and leadership skills development with the goal of addressing literacy, science, mathematics and ICT education that Ghana and the Sub-Saharan African region needs for economic and social advancement.

In terms of academic programmes, ACE-ELTT will be running M.Ed./M.Phil. as well as Ph.D./Ed.D in Pedagogy in Mathematics, Science, Technology, Literacy (in English, French, and other Regional Languages such as Kiswahili), Leadership and Management in Education, Educational Policy and Management, and Educational Planning. The ACE-ELTT project team further contend that the nature, content and approach of our newly designed programmes and courses for M.Ed, M.Phil, and Ph.D. will help improve the content and delivery of the existing programmes provided to our regular students in the mainstream. The Centre will run additional short courses on innovative approaches to teaching Science, Technology and Mathematics, as well as professional development courses in Action Research. Other short courses that will be run include: Literacy Programme Development, Approaches to teaching reading, National languages, Utilization of ICT for improved teaching and learning, Constructing Curriculum, utilizing teaching and learning materials, Developing Instructional Leaders (including developing school leaders as instructional coaches), Teacher management and deployment, Assessment and evaluation of learning, School based decision making, and Inclusive education, disability education, Assessment of cost effectiveness

of education programmes/education budgeting, Strategic Planning and Organizational Change, Access planning, school mapping, utilizing GIS, Education Management Information Systems (EMIS)/data analysis and interpretation/designing surveys, and Human resources management. These short courses will be run for mid-career professionals in education and students in Ghana and the sub-Saharan African region. The target group will include Lecturers, Tutors in teacher training institutions, school leaders, Circuit Supervisors (School Inspectors), Teachers and other professionals of education at the National and decentralized education units. The short courses will be developed in a consultative setting where the voice of the theory and science meets practice from industry and service providers.

In the area of research, institutional and individual research will form an integral part of the ACE-ELTT in addressing the development challenge confronting education leadership and teacher training in the West and Central Africa Sub-regions. The Centre will undertake research into innovative approaches to teaching, focusing its attention on issues such as instructional leadership, curriculum, teaching strategies and learning environment that draw on the social and cultural background of learners. Additionally, there are many cross-cutting issues pointed out in the main proposal that are relevant in Ghana and the Sub-region of Africa which we intend to take care of. These cross-cutting and interdisciplinary issues include technology integration in education, quality of education, and gender and equity. A typical research agenda that informs policy and practice concerning the cross-cutting themes is identified with the following research project areas: (a) promoting transformational instructional leadership for improved learning outcomes; (b) improving learning outcomes through innovative teaching approaches, using ICT; (c) improving the learning environment and outcomes for learners; and (d) challenges faced by tutors in the implementation of the teacher training curriculum.

To achieve the project objectives and outcomes of ACE-ELTT, we will forge partnership with individuals and institutions at the national, regional and international levels in areas of mutual interest. Based on our established approach, we intend to work with four groups of sectoral partners. The four groups are: national, regional and international agencies of education; national, regional and international development partners working in education in Ghana and/or within the Sub-Saharan Africa; Teachers and educational workers union/associations; national, regional and international research bodies. These groups were carefully considered since they are better placed as relevant and notable fellows in making efficient partners in developing the desired relationships in the education sector as well as carrying the banner of the ACE-ELTT project. In this regard, we have made preliminary enquiries and had spoken to 45 potential partners who have experience in either the Ghanaian or the sub-Saharan African education contexts regarding what they consider to be African educational development challenge. In the final analysis, the apparent determinant to making improved education and education services delivery that was found related to two variables, which are pedagogy and leadership. The goal is to address the developmental challenge identified by means of filling in the skills gap and thereby contributing towards poverty reduction and the creation of safe, strong and resilient communities in Ghana and the entire sub-region.

In the final analysis, the proposed ACE-ELTT expects to achieve both short and long-term outcomes upon the establishment and implementation of its programmes of activities. In the short term, it is expected that there will be: increased enrolment (with an estimated target of 21 doctoral and 280 masters students in postgraduate programmes in educational leadership and pedagogy in the area of literacy, science, mathematics and technology); trained, skillful and effective teacher educators in pedagogy and leadership; improved capacity of educators in research; improved methods of teaching in literacy, mathematics, science and technology; improved interest

of teachers in students' learning progress; improved students' interest, attitudes and learning outcomes in literacy and STM in particular; improved capacity of national and regional partners in performing their professional duties and/or roles. The long-term outcomes in ACE-ELTT's activities will include increased number of literate Ghanaian and African populace who have adequate mastery of literacy, basic mathematical, scientific knowledge and leadership skills. This will contribute to the supply of quality labor force to industry thereby resulting in high industrial output, improved GDP, reduction in poverty, reduction in crime, safe secured environment and development of strong, vibrant and resilient communities in Ghana and Africa as a whole.

5.3 Outlining the sustainability plan for the proposed ACE-ELTT project

As indicated in the Guidance Notes for the Open Capp for proposals for this project, funding for the project activities of the proposed ACE-ELTT is to be provided over the multi-year funding window by the World Bank under the AAU's Africa Centre of Excellence Programme. Beyond the period of ACE financial support, and in order to ensure that ACE-ELTT continues to play its role as Centre of Excellence for Education (that is, Educational Leadership and Teacher Training) and Research in the West African sub-region and beyond, a number of sustainability measures will be put in place and pursued vigorously. Given the national and regional and international character of the ACE-ELTT, the main focus of our sustainability strategy is on four key themes, namely financial sustainability; ongoing partnerships with sectoral stakeholders, continual improvement of the student educational opportunities and ongoing applied research that addresses improvement in students' learning outcomes, especially in the areas of Literacy, Science, Technology/ICT and Mathematics.

Obviously, financial sustainability is key to the survival of ACE-ELTT beyond the period of ACE financial support. To ensure financial sustainability, fees will be charged on academic and professional development programmes, even before ACE financial support ceases. The Centre will also commercialize its research activities to bring in some additional funds. The Centre will undertake funded research projects for institutions that engage its services as well as for its national regional and global partners. Findings from research activities will be published as books, which will be sold to bring in some extra income to support its programme of activities. The Centre's main/key staff will be drawn from the University. Hence, the Centre will not be responsible for payment of salaries and related benefits of its key staff. To ensure prudent financial management, the Centre will provide part-time teaching/research assistantship employment opportunities to graduate students who have the requisite qualification, knowledge and skills to support the Centre's activities. Again, the Centre will strive to diversify its sources of funding to also include exploration of the possibility of attracting extra funding from other local and international sectoral and institutional partners such as National Council for Tertiary Education, NGOs, individual philanthropies and multinational development agencies. Also, some of its partner institutions with staff with relevant qualifications and experiences will be recruited to support the activities of the Centre through teaching, research and delivery of short professional development courses. Lastly but not the least, volunteers from the academic institutions of higher learning from within Ghana, the sub-Saharan region and globally will also be sought and engaged in all its activities to help save cost.

In order to ensure continuous and sustained partnerships with relevant sectoral stakeholders, such as Ministry of Education, Ministry of Science, Technology and Innovation, West African Examinations Council, Teachers and Educational Workers Union (TEWU), UNESCO and JICA, beyond the period of ACE financial support, the Centre will ensure that these sectoral partners are consulted and involved in major decisions. Representatives from these sectoral partners will be involved in

identification of areas of interest in applied research and skills needs as well as development and innovations in the current and new programmes and short courses in order to sustain their interest in the activities of the Centre and make the programmes relevant to them. To ensure that the results from the Centre reach wider audience, the Centre will use communications such as social media profile, frequent emails to donor agencies about our activities and frequent update of the Centre's webpage. Again, in the area of sustaining on-going partnership with the relevant sectoral stakeholders, our partnership activities will be organized in ways that will provide a "win-win" situation for the Centre and its sectoral partners. For example, relevant sectoral actors will be incentivized to drive the research agenda of the Centre through commissioning applied research based on their organizational development needs while they (i.e. sectoral stakeholders) support the research costs. Similarly, staff of sectoral stakeholders with requisite academic/research skills and competencies will be drawn in to teach academic and short professional development courses of the Centre while the Centre in return will provide professional development training workshops and programmes for them based on their specific needs and demands.

For the continual improvement of students' educational opportunities to be sustained, ACE-ELTT will make concerted efforts to ensure that qualified and competent staff with the right attitudes and dispositions are attracted, recruited and retained both from Ghana and the sub-region to lead in teaching and research. This will ensure that the Centre activities are addressing the Development Challenges identified and thereby meeting the needs and aspirations of its clientele. As the Centre engages sectoral partners such as the Ministry of Education in its activities, these sectoral partners will be encouraged to provide employment opportunities for the graduates from the Centre. They will also be encouraged to provide for our students scholarships, internship grants and support for research activities. As an equal opportunity service provider, UCC and by extension ACE-ELTT will prioritize within its programmes and activities of delivery issues pertaining to social justice (and its related principles of equity, inclusion, fairness, disability, equality of opportunities and outcome, gender balance etc.) especially in dealing with students, collaborators and partner institutions. In order to stay competitive and make impactful presence in the sub-Saharan African region to improve the educational opportunities of our students, ACE-ELTT activities will be geared towards meeting high standards that are recognized internationally. Furthermore, the certification and accreditation of International Association of Universities (IAU) and Association of African Universities (AAU) will be pursued and obtained to ensure that our students are properly trained to become truly competitive at the global stage.

For on-going applied research that addresses ACE-ELTT's Development Challenge to be sustained in the long term, the Centre will strive to ensure that it is abreast with current local, regional and international discourses relating to developmental challenges facing Ghana and the entire sub-Saharan Africa. In so doing, the Centre will involve its partners in the identification of areas of interest in applied research to make its research agenda timeless and relevant. Also, while making concerted efforts to boost its existing relationships with research partners to keep its research agenda on-track, attempts will be made to develop new partnerships with institutions, stakeholders and individuals to explore "new" trends, opportunities and possibilities arising from existing and/or new development agendas.

6. Concluding thoughts

In this chapter, the issue of sustainability planning in research project proposal development has been addressed. In the process the various categories/types of

sustainability vis-à-vis the steps to sustainability planning in research project management have been identified and explored, although crisply. Through this, the question of how organizations, and for that matter research project teams, seeking funding from donors can ensure that their project proposals address sustainability issues in ways that satisfy financing criteria of the donors, while at the same time producing convincing evidence of how their project activities and programmes would have lasting impacts on communities of beneficiaries, has been exemplified. Typically, the effort and its corresponding evidence in this chapter lends support largely to Leon's [2] contention that on the threshold of the twenty-first century, faced with an increasingly competitive market, a globalized economy, and a context in which change is a constant rather than a variable, organizations and project teams seeking project funding must "think outside the box." They must, according to Leon, demonstrate the most advanced methods of income-generation they will use to achieve sustainability in all its facets and thereby ensure that their programme of activities fulfill their missions and have lasting impacts on target groups even after funding regimes for such activities elapse.

In this context, and in my candid view, therefore, the need to achieve sustainability planning in project proposals is both tangible and crucial as it enables organizations and project teams to make tremendous strides in increasing income generation internally and thereby see decline in donor dependence. While this may be the most obvious benefits of planning sustainability, organizations, higher education institutions and research project teams tend to benefit from sustainability planning additionally in the following four ways. First, having sustainability plans in place means that organizations, higher education institutions and project teams are enabled to make autonomous decisions that truly reflect local, rather than international priorities. That is, they do not dance necessarily to the whims and caprices of donors mainly because they have greater freedom and independence in deciding on their strategies and activities when they generate their own resources. Second, and following up on the first point, in the process of building sustainability strategies, higher education institutions most often routinely examine their operations and procedures which leads to internal strengthening, enhanced management and team building. Third, when a higher education institution or research project team has a clear sustainability strategy and a record of how they intend to generate internal income within its project proposal, this improves the institutional image of the organization or project team in the eyes of potential and existing donors and can enable them attract more external funding for undertaking project activities. Fourth, as higher education institutions and/or project teams demonstrate their sustainability plans and strategies in their project proposals, their relationships with partners in development programmes improve and they become recognized and incentivized to negotiate on the basis of exchange rather than as benefactor and recipient.

Acknowledgements

My sincerest and deepest gratitude goes to the authors whose works I have gleaned in order to put together this piece. My special thanks also go to all our ACE-ELTT Project team members who helped in diverse ways to put together the project proposal for onward submission for funding request from donors. Indeed I am indebted to you all for your ideas and support in putting together the bid described in this chapter.

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