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## Capacity Building: Implications for Sustainable Development in Ghanaian Polytechnics

**Korantwi-Barimah Justice Solomon**

Lecturer, School of Business and Management Studies, Sunyani Polytechnic, Ghana

**Alex Ofori**

Lecturer, School of Business and Management Studies, Sunyani Polytechnic, Ghana

### **Abstract:**

*This descriptive study examines the facts concerning capacity building. It considers the implications, arising from the review of the literature, for sustainable development in Ghanaian polytechnics in their quest to train career-focused graduates for the nation's industries. Polytechnics in Ghana are expected to use competency-based training (CBT) curriculum for their programmes so that their students could be more practically oriented to be ready for the world of work. Capacity building should therefore be a necessary component of policies to enhance the quality of teaching and learning in these polytechnics. Apart from gaining pedagogical and content knowledge, lecturers' participation in capacity building interventions enhances capacity building effectiveness in the polytechnics. Without it, a missing gap evolves whereby the polytechnics become shadows of themselves. Unfortunately, capacity building efforts by the polytechnics have been hampered by institutional inadequacies, chief among them being training-related issues, infrastructural limitations and lack of funds. The consequences of this are inefficiencies and poor quality of delivery and research output among lecturers in the polytechnics.*

*To stem the tide of teacher underperformance, the central argument in this paper is that building teacher capacity is critical to successful teaching and learning. Towards this end, the paper identifies some intervention strategies for helping polytechnic teachers to improve their skills, knowledge and competences, involving concurrent provision of appropriate training, provision of necessary resources, materials and infrastructure. It concludes by calling on the management of the polytechnics to create an enabling environment that would encourage the lecturers to participate fully in capacity building programmes.*

**Key words:** Ghanaian polytechnics, implications, capacity building, sustainable development, competency-based training

### **1. Introduction**

Lecturers in Ghana's polytechnics need to update their knowledge and skills and be conversant with the latest developments in the field. As enshrined in the Polytechnic Act 2007 (Act 745), teachers have multiple roles to perform like teaching, research, development of learning, and coordinated programmes for professional development of other teachers. According to Egbo (2011), there is a consensus among stakeholders in education that as micro-level practitioners, teachers represent a centripetal force in most educational systems and that their performance is inextricably linked to educational outcomes for both learners and the system alike. As noted by Colle and Yonggong (2002), institutions of higher learning are regarded as the generators of knowledge through research, analysis, information, integration and discussion. They store knowledge in their libraries and they pass on knowledge and information through formal instruction, fora, non-formal education and publications. Consequently, polytechnics require enhancement of their teachers' capabilities to periodically generate and disseminate knowledge if they are to remain relevant in this era of globalization. This will enable them meet the aspirations of the citizenry by ensuring that their roles meet the demands of the present time and that of the future in their quest to train career-focused graduates for the nation's industries.

The concept of capacity building as a development practice has generated substantial interest among researchers, policy makers and practitioners. OECD (2006) defines capacity building as "the process by which individuals, groups, organisations, institutions and societies increase their abilities to perform core functions, solve problems, define and achieve objectives; and understand and deal with their development needs in a broad context and in a sustainable manner". The demand for sustainable capacity building programmes for lecturers in Ghana's polytechnics has never been more important than it is today as the challenges they face intensify and the expectations for quality polytechnic education in Ghana increase. The case is crucial in the wake of reforms in the provision of relevant higher technical and vocational education following the passage of the new Polytechnic Act, 2007(Act 745) which mandates

the polytechnics to run Bachelor of Technology (B-Tech) degrees alongside the existing Higher National Diploma (HND) programmes. Polytechnics are expected to use competency-based training (CBT) curriculum for their programmes so that their students could be more practically oriented to be ready for the world of work. Capacity building should therefore be a necessary component of policies to enhance the quality of teaching and learning in these polytechnics. Apart from gaining pedagogical and content knowledge, lecturers' participation in capacity building interventions enhances capacity building effectiveness in the polytechnics. It transforms role performance abilities and skills of lecturers in such a way and manner that they meet and fit adequately in the challenges of their jobs. Without it, a missing gap evolves whereby the polytechnics become shadows of themselves. Against the above background, this paper article proceeds from the assumption that teaching and learning can, at best, be only marginally successful without addressing the "teacher" question in substantive ways. This is particularly true in the case of polytechnics in Ghana where there is a public outcry of production of sub-standard graduates which has been attributed in part, to teachers who, as the arguments goes, have not been carrying out their primary mandates of teaching and promoting learning with quantifiable success. Also, evidence gathered indicates that capacity building efforts by the polytechnics have been hampered by institutional inadequacies, chief among them being training-related issues, infrastructural limitations and lack of funds. This has negatively affected institutional provisions for lecturers' participation in capacity building programmes. The consequences of this are substantial inefficiencies and poor quality of delivery and research output among lecturers in the polytechnics. A study by Nsiah-Gyabaah (2009) has further revealed that in spite of various innovations and financial assistance poured into the polytechnic educational system by both foreign and local aid donors, there appears to be no significant change in the quality of polytechnic education in Ghana. In order to bring desired change as well as to stem the tide of teacher underperformance, the article argues that the polytechnics need to urgently build teacher capacity in teaching competence and research output. Given the widespread interest in capacity building, the question remains, what does this imply for sustainable development in Ghana's polytechnics? In order to address this question, the article considers the relevance of capacity building and explores the implications for sustainable development in the polytechnics.

The paper begins with the introduction and the objectives of the study, followed by the discussion of the development and the mission of polytechnics in providing career-focused education in Ghana. The methodology used, rational for advocating teacher capacity building, and the review of the concept of capacity building and its elements then follow in that order. A discussion of the way forward or areas of strategic intervention in ensuring effective building of capacities of polytechnic lecturers for sustainable development follows, with the paper ending on conclusions drawn.

## 2. Objectives of the Study

The main objective of this paper is to highlight the implications of capacity building programmes for lecturers in Ghanaian polytechnics in their quest to become the institutions they are mandated to be and to train the needed manpower for the nation's socio-economic sector. Other specific objectives include to suggest possible solutions to the identified capacity building gaps in the polytechnics and to prescribe ways to improve efficiency among polytechnic graduates for sustainable development.

## 3. Research Methods

This paper is based on the literature review of the corresponding author's on-going doctoral thesis, which is about developing a strategy for capacity building amongst academic staff in Ghanaian polytechnics. The data were obtained mainly from secondary sources, involving information from books, journals and the internet. Additionally, reports and documents relating to polytechnic education in Ghana were used. The article is purely descriptive. It does not claim to be a systematic review of the literature, but rather draws upon the available evidence to highlight what we know.

## 4. Development and the Mission of Polytechnics in Ghana

Polytechnics in Ghana were originally called technical institutes when they were established in 1951. According to Nsiah-Gyabaah (2005), the said technical institutes were re-designated as polytechnics in 1963 but they continued to operate essentially as non-tertiary institutions which offered mostly advanced craft courses and a few technician programmes. In 1992, a Polytechnic Law (PNDCL 321) was promulgated to give legal backing to the upgrading of polytechnics. Consequently, as stated by the National Council on Tertiary Education (NCTE, 2001), from 1993 onwards the polytechnics were upgraded to tertiary status to offer additional career-focused programmes in the sciences, technology and business management leading to the award of Higher National Diploma (HND).

According to a report by the Technical Committee on Polytechnic Education in Ghana, also known as Kwami Report (2001), polytechnics in Ghana are described as "technological institutions contributing actively to national development by providing career-focused education and skills training to the highest level possible and providing opportunities for applied research in close collaboration with business and industry". In 2007, there was another step in the academic growth of the polytechnics in Ghana with the passage of the new Polytechnic Act, 2007 (Act 745) to run Bachelor of Technology (B-Tech) degree programmes along with the already existing HND programmes as part of strategies to improve on the capabilities and capacities of the polytechnics to meet the manpower needs of the nation. The Act 745 restates the mission of the polytechnics as to:

- Provide tertiary education through full time courses in the field of manufacturing, commerce, science, technology, applied social sciences, applied arts and such other areas as may be determined by authority for the time being responsible for higher education;
- Encourage study in technical subjects at tertiary level; and

- Provide opportunities for development, research and publication of research findings.

Clearly, the above mission indicates that the central focus of polytechnic education is its career-oriented nature, to prepare students for middle level supervisory and managerial positions in business, technology and industry in Ghana. As suggested by the Institute for Governance and Sustainable Development Studies (2010), this objective can only be achieved through the impartation of relevant knowledge and skills to the lecturers to enable them acquire the requisite competences that enhance value-added decision-making processes and as well develop the requisite capacity to effectively handle challenges enshrined in their job positions and ultimately improve their job performance. However, since their establishment, polytechnics in Ghana have been beset with a number of problems, resulting in the inability of polytechnics to fully achieve their mandates. As reported by Kwami Report (2001), there is misconception about the roles and lack of clarity about the mission and focus of the polytechnics. Again, there are few qualified teachers in most polytechnics, with teaching loads averaging around 21 hours per week, hence academic work is more suited to teaching than to research. A situation, similar to what was happening in the Technikon of South Africa a decade ago when teaching loads in most Technikon averaged 25 contacts hours per week (Ogudeet *al.*, 2003). Apart from the need to improve the student-lecturer ratio, funding in the polytechnics is a serious problem. This has negatively affected institutional provisions for lecturers' participation in capacity building programmes such as conferences, seminars, workshops and ICT training. The consequences of this are substantial inefficiencies and poor quality of delivery and research output among lecturers in the polytechnics.

### 5. Why the Need for Teacher Capacity Building in Ghanaian Polytechnics

One may ask, what is the likely impact of capacity building on teaching and learning and subsequently, its implications for the sustainability of polytechnic educational system in Ghana? In addition to the problems identified in the Kwami's Report (2001) above, a recent study by Korantwi-Barimah, Sekyere and Ofori (2014) indicates that there is a general perception that a significant number of polytechnic teachers in Ghana are not equipped to deliver quality polytechnic education for a number of interconnected reasons chief among them being training-related issues and infrastructural limitations. *This state of affairs is seriously undermining the role, importance and contribution of polytechnic education to national development. As argued by Niyozov (2008), no nation can build a strong and effective educational system without the continuous appraisal and subsequent improvement of its teacher training programmes since teachers remain the pillars of the system. Interestingly, increasing student achievement depends on teachers whose performance in turn, hinges on building their capacity. Even though capacity building should, ideally and proactively, be an integral part of strengthening social institutions and providing enabling conditions for premium performance by the individuals within the sector, to a certain extent, Egbo (2011) argues that a systematic focus on capacity building within a given social sector in most societies is an indication of disequilibrium within that particular sector.*

As economists and other educational experts have argued, the output of education is a durable capital asset the possession of which increases the overall quality of life in most societies. Similarly, Todaro and Smith (2012) argue that with regards to economic development, the quality of education as demonstrated by the quality of teaching, facilities and curricula, matters in very important ways. Teacher capacity building in Ghanaian polytechnics must be accorded the needed attention because, as Egbo (2009) argues, a government may promulgate macro-level policies but until they are interpreted and delivered to students at the micro-level, they remain just that- words and ideas on paper.

Further, Mati (2008) contends that capacity building is as important as capital investment and infrastructure. As the evidence shows, in developed countries, significant resources are committed to capacity building as a critical aspect of developing the best possible system. Egbo (2011) mentions that even though education is a provincial affair in Canada, the various provincial governments make concerted efforts to support teachers in their work including enacting policies and legislation that mandate continuous professional learning for teachers. Arguably, disregarding the capacity building needs of polytechnic teachers would be, in effect, detrimental to the progress of the entire polytechnic educational system in Ghana. Consequently, the polytechnics, the government and other policy makers need to focus on capacity building of lecturers for their collective benefits. According to McDonnell and Elmore (1991) as cited in Delaney (2002), the benefits of capacity building are consequential, "in the short term, [they accrue] to the specific individuals and institutions that are their recipients, but the ultimate beneficiaries are future members of society, whose interests cannot be clearly determined in the present". Crucially, for capacity building to be effective, it must respond to the growth and development needs of the individual as well as those of the relevant institutions. According to UNESCO (2006), capacity building in education is "important both for the functioning of the education system as well as for capacity building in other sectors....an essential aspect of capacity building is enhancing the ability of individuals, institutions and systems to cope with change and unforeseen challenges". From the foregoing, it can be safely argue that for all practical purposes, building teacher capacity in our polytechnics is, ultimately, engendering development, growth and excellence within Ghana's education system.

### 6. What is Capacity Building?

Despite its wide usage in educational reform discourse, the concept of capacity building is an often misunderstood social construct. For conceptual clarity then, this paper begins with a definition of "capacity building". According to the United Nations Environment Programme (2006), capacity building has to do with building abilities, relationships and values that will enable organisations, groups and individuals to improve their performance and achieve their developmental objectives. Lusthaus, Adrien and Perstinger (1999) took the view that capacity building is a concept that has different meanings for different people, but in general relates to enhancing or strengthening a person's or organisation's capacity to achieve their goals. Egbo (2011) opined that at its most basic analysis, capacity

building has to do with the allocation of, and investment in resources- physical, intellectual or human especially when other intervening variables have failed within a given institutional or social context.

Elaborating on the concept of capacity building, Philbin (1996) also defines it as a process of developing and strengthening the skills, instincts, abilities, processes and resources that individuals, organisations and communities need to survive, adapt and thrive in the fast changing world. In a similar vein, Linnell (2003) describes capacity building as activities that improve an organisation's ability to achieve its mission or a person's ability to define and realise his/her goals or to do his/her job more effectively. UNESCO (2006) reports that capacity building focuses on increasing an individual and organisation's abilities to perform core functions, solve problems, and objectively deal with developmental needs. This is supported by Morgan (1997), as quoted by Horton (2002), who referred to capacity building as improving or upgrading the ability of a person, team and institutions to implement their functions and achieve goals over time.

According to the United Nations Committee of Experts on Public Administration (2006), capacity building takes place on an individual level, institutional level and societal level. On an individual level, it requires the development of conditions that allow individual participants to build and enhance existing knowledge and skills. It also calls for the establishment of conditions that will allow individuals to engage in the process of learning and adapting to change. On an institutional level, it involves aiding pre-existing institutions and supporting them in forming sound policies, organisational structures and effective method of management. At the societal level, capacity building supports the establishment of a more interactive public administration that learns equally from its actions and from feedback it receives from the population at large.

Capacity building has three different dimensions namely: building awareness, building analytical capacity and building decision-making capacity. Building awareness involves offering activities, presenting new topics or demonstrating new methods through workshops, seminars and conferences. The presentations are meant to create awareness about a particular activity, topic or method so as to enable beneficiaries apply them in performing assigned tasks. Building analytical capacity involves designing a capacity building programme using interactive style of presentation. It uses exercises, case studies, field visits and other elements of experiential learning, which promote critical thinking among the beneficiaries. Building decision-making capacity also has to do with laying emphasis on learning-by-doing as well as formal education. The beneficiaries are exposed to professionals to receive training on project completion. By so doing, the beneficiaries acquire learning-by-doing experiences. A lot of capacity building activities that are currently offered through workshops, seminars and conferences remain at an awareness raising level. It is the analytical and decision-making capacities that are needed to sustain a constant process of change (United Nations Environment Programme, 2006).

## **7. Approaches for Capacity Building of Academic Staff**

Coutts (2003) states that capacity building entails upgrading the abilities and resources of individuals, organisations and communities to achieve a goal. This occurs through a number of ways. According to the United Nations Environment Programme (2006), a wide range of approaches are available to build capacities including training, formal education, capacity building projects, networking and others. In a similar vein, Reimers (2003) posits that in-service training usually consists of workshops or short-term courses that would offer teachers new information on a particular aspect of their work. Stephen *et al.* (2006) mentioned that conferences, workshops, seminars, consultations, study tours, participatory research, on-the job training, demonstration plots, coaching, and mentoring are the main methods to build the capacity of academic staff to guarantee a good mix of theory and practice.

Chase (2005) reports that academic staff feel that their development is greatly affected by freedom to attend conferences as this enhances their professional status and raises their awareness of new developments in the field. Hayden (2003) also believes that conferences provide those academics that participate in them the opportunity to share information and ideas with the experienced ones; experienced academics transmit institutional, planning and management skills that can help new academic staff to break the isolation, and reflect on a day's experience and redirect efforts for the following days. With regards to seminars, Nakpodia (2001) mentions that they are organised for personnel in school organisations to keep them adequately informed of certain developments in academics or education which are vital for the performance of their primary functions. As noted by Jacob and Lefgren (2001), this accounts in no small measure in enhancing teachers' role performance skills and provide on-the-job training to expose them to new techniques concerning content and pedagogy. As a model for capacity building, workshops focus on academic staff training and development which facilitate the imparting of specific skills, abilities and knowledge to them. Sergiovanni and Elliot (2000) found that in workshops, participants are actively involved in contributing data, solving a problem or conducting an analysis using quantifiable data. The results which are in the form of feedback enable participants to compare their reactions with those of others and thereafter the results are discussed and analysed to develop generalizations and implications for practice.

Alternatively, Klasen and Clutterbuck (2002) mentioned that mentoring has been regarded as one of the learning methods used to enhance individuals learning and development in all spheres of life. Developing academic staff through mentoring to possess the necessary sets of academic competencies can therefore have a tremendous impact on the effectiveness and sustainability of polytechnic education in Ghana. It involves passing on skills, attitudes and knowledge from experienced academic staff to junior staff. Mentoring supports professional growth and renewal, which in turn empowers faculty as individuals and colleagues (Boice, 1992). Teaching and research improve when junior faculty are paired with mentors which in turn result in job satisfaction and organisation socialization. Not only do protégés become empowered through the assistance of a mentor, but mentors themselves also feel renewed through the sharing of power and the advocacy of collegiality (Luna & Cullen, 1995). Mentors should be highly skilled in communicating, listening, analysing, providing feedback and negotiating with less experienced persons. Eade (2007) summarised the



requirements of a mentor with “you can’t build capacities in others that you don’t have yourself. And if you can’t learn, you can’t teach either.”

### 8. Areas of strategic intervention for sustainable development

The remainder of the article offers implications of capacity building and areas of strategic interventions for sustainable development. One thing is absolutely clear; polytechnic education is capital intensive and that without adequate funding, the polytechnics will exist as shadows of what tertiary education is all about. Therefore, meeting the tertiary educational needs of the 21<sup>st</sup> century will require the government of Ghana to improve upon the funding of tertiary institutions by meeting the UNESCO benchmark of 26 percent of annual budgets. Alternatively, authorities in the polytechnics need to source, both internally and externally, for funds to initiate capacity building programmes. This will place the polytechnics on sound footing to successfully meet the present challenges without compromising that of the future. In building teacher capacity, Egbo (2011) suggests that the focus should be on the areas of policy, training, and pedagogy, infrastructure development, and teacher welfare and empowerment. O’Day *et al.* (1995) as cited in Mayotte, Wei, Lamphier, and Doyle (2013) identified areas where capacity can be enhanced to strengthen reform efforts as:

- Teacher performance.
- Resource availability.
- Organisation of work.
- Delivery of professional development services.

Building teacher capacity in Ghanaian polytechnics also requires that the government and other policy makers must provide the necessary infrastructure, resources, materials and equipment that are required to teach effectively. This is so because it is unrealistic to promote teaching excellence in environments that predispose both teachers and learners to failure. As noted by Egbo (2011) like everyone else, teachers vary in their abilities and personal characteristics but the availability of the requisite infrastructure and materials, makes it more likely that a majority will succeed in their teaching and pedagogical practices.

ICT training of lecturers in the polytechnics should also be accorded a top priority by the authorities. This has become necessary because ICT is relevant in virtually every academic work, ranging from classroom teaching and management of students’ results to research productivity. Evidence suggests that creating ICT-based learning environments would enable polytechnic teachers to make full use of all available information and communication technologies. Shields and Behrman (2000) state that if technical and vocational education (TVET) teachers are to become “learning facilitators” in a connected world of universal information access to lifelong learners, then they will be challenged to maintain their own capacity and be able to employ ICT effectively both to teach and to learn.

Another area of intervention is the need to broaden the scope of the curriculum of the polytechnics to reflect Ghana’s requirements for sustainable development and also be reflective of a complex global arena. In line with that, Polytechnics will have to pursue affiliation with other specialized universities at home and abroad and forge strong collaboration with other higher institutions and industries in the country. Perhaps even more important, it is crucial that only the right kind of people are recruited into the polytechnics since one cannot justify allocating resources to building the capacity of those who lack the basic foundation for a positive outcome from such an investment. Martinez (2007:94) believes that “capacity building opportunities should focus on young people who are not burdened with administrative or other duties and have more time to drive developments from the bottom up.” Supporting the building of capacities of younger academics in Ghana’s polytechnics sounds appropriate because young academics will run the polytechnics in the future. In doing so, Egbo (2011) suggests that in-service and continuous professional development programmes for teachers should be geared towards the following:

- Using local materials to support teaching,
- Integrating technology across the curriculum;
- Learner-centred approaches to teaching and learning
- Teaching for sustainability
- Effective classroom management
- Teaching for social justice
- Strategies for upholding the standards of the profession.

Further, management of the polytechnics should put in place modalities whereby mentoring of junior lecturers by senior ones could be vigorously pursued and promoted. This will not only enhance the empowering capacity of the polytechnics on their lecturers, but will also improve teaching and research, job satisfaction and organisational socialization of their lecturers. Again, provision of quality education should transcend the curriculum and the teaching and learning process. It must also include collateral interventions. Research has shown that there is a correlation between teachers’ perception that their basic needs for survival are being met and their tendency to act in professional and committed ways. In every education system, low morale and motivation often leads to poor teacher performance. Consequently, effective capacity building requires that polytechnic teachers be treated in ways that commensurate with the principles of social justice. Their welfare must be accorded the importance it deserves.

Finally, an enabling environment should be created in the polytechnics to encourage lecturers to participate massively in workshops, seminars and conferences. This will equip them with new skills, techniques, knowledge and experiences necessary to enhance their job performance capacity at the individual levels. The capacity derived from these programmes by lecturers can also place them on a better pedestal to tackle present and future challenges in their jobs. For the institutions, lecturers’ participation in these programmes will give them the enablement to be relevant in the present time as well as in the future - a measure that will enhance their rankings

both within and outside the country. This will no doubt, go a long way in promoting the potential continuity of polytechnics in Ghana and also give them the leverage to occupy a pride of place among their peers in the sub-region.

## 9. Conclusion

The main thrust of the discussion in this article is that there is a dire need for building teacher capacity in Ghanaian polytechnics in order to improve teacher performance and, implicitly, produce career-focused graduates to man the nation's socio-economic sector for sustainable development. The current situation demands immediate, radical and transformative changes to reverse the culture of students' failure, teacher underperformance and systemic decline. For the polytechnics to make any difference at all, one thing is clear- while teachers must strive towards excellence, providing them the requisite facilities, materials and equipment to succeed is an essential component of their growth and development as professionals. As a result, policymakers in Ghana should be spurred into devising important strategies that will respond to the challenges within the tertiary education system, one of the most important being teacher capacity building.

This paper concludes that it would be seductive to think that the most expedient approach to addressing the capacity building gap within the polytechnics is the wholesale importation of a Western model. Undoubtedly, that would be impractical. As Niyozov (2008) suggests, policy-makers in developing countries should be cautious about adopting externally developed bureaucratic approaches to addressing perceived deficiencies in teaching practices. It is therefore suggested that the current challenges within the polytechnics call for drawing on tried and tested elements of a variety of teacher capacity building models to develop a unique and contextualized model.

This paper has proposed some intervention strategies for helping teachers to improve their skills, knowledge-base and competencies as a blueprint for moving forward. These involve simultaneously providing the appropriate training, the provision of the necessary resources, materials and infrastructure that will foster sustainable teacher commitment to effective teaching and learning as well as ensure the successful implementation of Ghana's tertiary educational policies.

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