Quality Assurance Strategies in Higher Education: The Case of Ghanaian Polytechnics

Patrick Swanzy[†]
Institute for Post School Studies
University of the Western Cape, South Africa

Anthony Potts
University of Adelaide, Australia

This study investigated the internal quality assurance strategies Ghanaian polytechnics enacted in order to improve graduate outcomes. A qualitative methodological approach via in-depth interviewing of twenty key informants and document analysis was used to establish how polytechnics in Ghana addressed problematic situations in quality assurance. The findings revealed that their internal quality assurance strategies focused on staff and students, where quality concerns were most prominent. These strategies seem to have enhanced teaching and learning in the polytechnics but there was the need for them to re-institutionalise their internal quality systems to enable them to deliver quality vocational and technical education.

Introduction

Quality assurance has been widely embraced in the higher education sector in the past two decades. It is seen by many as a possible pathway for higher education institutions to follow to improve the quality of their education provision and cater for the interest of external stakeholders (Nenadál, 2015; Rosa & Amaral, 2014; Vroeijenstijn, 1995). Quality assurance in higher education like the quality concept is without an agreed definition and differ in its implementation in different contexts. Various scholars have attempted to theorise the concept. Harvey and Green (1993) define quality assurance as ensuring that there are mechanisms, procedures and processes in place to guarantee that the desired quality, however

---

[†] Address for correspondence: Patrick Swanzy, Institute for Post School Studies, University of the Western Cape, South Africa. Email: 3748273@uwc.ac.za

defined and measured is delivered. Quality assurance is also viewed as the means by which an institution guarantees with confidence and certainty, that the standards and quality of its educational provision are being maintained and enhanced (Friend-Pereira, Lutz, & Heerens, 2002). Furthermore, Woodhouse (2006) defines quality assurance as those systems, procedures, processes and actions intended to lead to the maintenance, monitoring and achievement of quality. These suggest quality assurance involves a variety of practices and this has been categorised under external and internal. Practices such as accreditation, audit and assessment form part of external quality assurance whilst procedures such as admission criteria, teacher appraisal, programme review, examination moderation and rules and regulations are among internal quality assurance strategies used by higher education institutions.

Since the inclusion of formal quality assurance structures in the higher education systems of countries in the Global North, quality assurance has spread rapidly to countries in the Global South (Dill, 2010). Quality assurance now tops the list of educational agenda of most governments (Odhiambo, 2014). Quality assurance also seems to have been promoted through regional and international cooperation. For example, quality assurance organisations such as the European Network for Quality Assurance in Higher Education (ENQA), Asia Pacific Quality Network (APQN) and the International Network for Quality Assurance Agencies in Higher Education (INQAAHE) have been established to coordinate and enhance the quality of higher education systems in various regions of the world (European Association for Quality Assurance in Higher Education, 2009; Njoku, 2012).

Sub-Saharan African countries are not immune to these global trends and have reacted positively. Recent developments in their higher education systems point to an increasing focus on using quality assurance as an important mechanism to make their higher education more efficient and competitive (Ansah, 2015; Kigotho, 2013). For example, more than 20 African countries have national agencies for quality assurance but have different implementation strategies. Furthermore, organisations such as Association of

African Universities (AAU) and African Quality Assurance Network (AfriQAN) have been set up by the African Union (AU) to promote quality culture in Africa's higher education systems (Oyewole, 2012).

Ghana is the headquarters of the Association of African Universities, which is working to strengthen institutional capacity for quality assurance in Africa's higher education systems (Ansah, 2015). The country has also adopted strategies similar to countries such as Britain and Australia touted as having robust systems in place to enhance the quality of their higher education provision. Ghana in 1993 established the National Accreditation Board (NAB) similar to Britain's Quality Assurance Agency for Higher Education (QAA) and Australia's Tertiary Education Quality Standards Agency (TEQSA) to serve as a quality assurance regulator for her higher education institutions including polytechnics (Government of Ghana, 2007a). Additionally, the National Board for Professional and Technician Examinations has been instituted by the government of Ghana to formulate, and administer schemes of examinations, evaluation, assessment, certification and standards for polytechnics in Ghana (Government of Ghana, 1994). Ghana requires higher education institutions including polytechnics to initiate mechanisms for internal quality assurance to complement the initiatives undertaken by the external quality assurance regulators. These suggest that Ghana is paying greater attention to quality higher education and is increasingly recognizing the need for effective quality assurance mechanisms (Materu, 2007). However, there appears to be a knowledge deficit in the type and context relevance of quality assurance used by the Ghanaian polytechnics in their operations. The aim of this paper is to examine the available quality assurance strategies and their context relevance to maintain standards and enhance quality in polytechnic education.

The Ghanaian higher education system

Ghana's higher education sector includes universities and non-universities. These are made up of 9 public universities, 10

polytechnics, 27public nurse training colleges, 38 public colleges of education, and over 65 private tertiary institutions (National Accreditation Board, 2016). Ghanaian universities are a mix of public, private, national and international institutions whilst the non-university sector includes polytechnics, colleges of nursing, colleges of education and several national or international specialized colleges all under the supervision of the National Council for Tertiary Education (Bailey, Cloete, & Pillay, 2011).

Enrolment in the Ghanaian higher education sector has increased steadily in the last decades. Statistics from the National Accreditation Board (2016) suggest an increase from 9,997 in 1992 to 132,000 in 2010 (Bailey et al., 2011) and 396, 264 in 2014 (National Accreditation Board, 2016). Ghana's gross enrolment ratio (GER) stands at 12% (Duwiejua, 2015) but this figure is too low for Ghana's status as a middle income country and also below the global average of 26% (UNESCO, 2010). Further to this are gender disparities in the Ghanaian higher education sector. The male to female student ratio is 3:2 (National Accreditation Board, 2016), with the exception of Nurse Training Colleges where 75.3% of the students are females (Government of Ghana, 2013).

Ghana's development plan requires the nation to achieve a ratio of 60:40 sciences to humanities manpower base by the year 2020 (Ministry of Education, 2012b). Yet enrolments in Ghana's higher education sector are skewed towards humanities. For example, Science, Technology, Engineering and Mathematics (STEM) and Arts/Humanities ratio was 36:64 in 2001-2002, 35:65 in 2002-2003 and 38:62 in 2007-2008 academic years respectively in public universities. In the case of the polytechnics, the ratio was 32:68 in 2006-2007 for STEM and Arts/ Humanities respectively (Ministry of Education Science and Sports, 2010). The ratio of STEM to Arts/Humanities in 2010-2011 was 40:60 and 33:67 for public universities and polytechnics respectively in favour of Arts/Humanities (National Council for Tertiary Education, 2012).

Higher education in Ghana is mainly funded by the government. The government allocates 23% of its budget to education (Ministry

of Education, 2012a). Out of this, 21.6% is allocated to the higher education sector (Ministry of Education, 2012a). Unfortunately this falls short of the funds required by higher education institutions, negatively impacting on their academic operations (Materu, 2007). This shortfall in funding in the sector is systemic amongst West African countries and even in South Africa where major higher education growth and transformation has taken place (Teferra, 2013). To boost funding in the sector, Ghana government established the Ghana Education Trust (GET) Fund to provide additional funds for the development of physical and academic infrastructure (Bailey et al., 2011).

Despite these financial arrangements, public investment in the Ghanaian higher education sector has not been able to keep pace with enrolments in the sector (Materu, 2007). To enhance their financial sustainability, Ghanaian public higher education institutions obtain additional funding through what is known as "cost sharing". Officially, public higher education in Ghana is tuition free, however students contribute towards the use of academic facilities through payment of what is termed "academic facilities user fees" (Bailey et al., 2011). Additionally, Government allows public universities to allocate 10% and 5% of their enrolment quota to foreign and Ghanaian full–fee paying students respectively. For example, student fees contributed 31 percent of university budgets in 2005 (Adu & Orivel, 2006). Though cost-sharing schemes were met with student resistance prior to their introduction, they have brought in additional funding to supplement insufficient government subventions (Materu, 2007). This together with other funds derived from admission fees, consultancies and rent income allows public higher education institutions to generate substantial "own revenue" (Bailey et al., 2011). These financial arrangements exclude the private higher education sector. Private higher education institutions receive their support from the government in the form of tax exemptions. The financial position of most public higher education institutions appears to have improved as a result of these interventions however, the Ghanaian higher education sector is still considered to be underfunded compared to other similar sectors (Materu, 2007).

Ghanaian Polytechnics in context

Ghana has 10 public polytechnics. They are strategically positioned in the country to improve access to higher education and ensure equity of provision. Specifically, their mission is to among other things provide tertiary education in the fields of manufacturing, commerce, science, technology, applied social science, applied arts and any other field approved by the Minister of Education (Government of Ghana, 2007b). They offer mainly Higher National Diploma (HND) which is centrally certified by the National Board for Professional and Technician Examinations (NABPTEX) (Ng'ethe, Subotzky, & Afeti, 2008). Prior to this, the polytechnics were post-secondary institutions that trained vocational, technical and business students for external examining bodies like City and Guilds and Royal Society of Arts (RSA) of the United Kingdom. Currently, some polytechnics (Takoradi, Kumasi and Accra) run Bachelor of Technology (B.Tech) degree programmes (Gondwe & Walenkamp, 2011). The B.Tech degree programmes have a strong practical component and are expected to offer HND graduates with a more logical avenue for academic and professional progression (National Council for Tertiary Education, 2014). Hitherto HND graduates might have to study for additional three years or more before obtaining a bachelor degree at the university due to differences in orientation of university and polytechnic education (Ng'ethe et al., 2008). The government of Ghana has since September, 2016 converted some Ghanaian polytechnics into technical universities with the objective of upgrading the training and qualifications offered by them (Government of Ghana, 2016).

The Study

This study examined the internal quality assurance strategies Ghanaian polytechnics practiced and was guided by these specific research questions.

1. What internal quality assurance strategies do Ghanaian polytechnics enact in their quest to provide quality vocational and technical higher education?

2. How are the strategies appropriate in their context?

The focus of the study situated it in the qualitative inquiry domain. A purposive sampling technique was used to select 20 key informants (six rectors, six vice rectors and eight quality assurance officers) from eight Ghanaian polytechnics to participate in this study. These were a select group of people who were especially knowledgeable and experienced about quality assurance (Bryman, 2012). To understand their social world required listening to their experiences and probing their experiences. A consent form and an information sheet were given before each interview, outlining the objectives of the research, the criteria for selection of respondents and the rights of each respondent (Cheng, Taylor, & Tong, 2016). Interviews were conducted at their offices. They preferred this venue and cited convenience as the reason. The interviews were open ended and focused on these key questions: what internal quality assurance strategies do Ghanaian polytechnics enact in their quest to provide quality vocational and technical higher education? Are these strategies effective in their context? The interviews lasted between thirty to fifty minutes, were audio taped to enhance accuracy and later transcribed. The interview responses were augmented with data from documents that focused on quality assurance practices such as polytechnic statutes, quality assurance policies, strategic plans, ethics policies, staff recruitment policies, external quality assurance reports and meeting minutes. These data were coded, categorised and thematically analysed to make meaning (Ary, Jacobs, Sorensen, & Walker, 2014). Anonymity and confidentiality of the key informants and their polytechnics were assured by replacing their real identities with alphabet and numbers.

Findings and discussion

Fourteen core themes emerged as a result of the analysis and interpretation of the data which revealed the internal quality assurance strategies that Ghanaian polytechnics enacted in order to achieve the quality they desired. These quality assurance strategies focused on staff and students and are presented below.

Transparent and merit-based staff recruitment processes

The majority of the polytechnics (K, C, S, H, T) indicated they had quality assurance strategies in place to maintain standard and enhance quality. One of such quality assurance strategies is to hire qualified academic staff through transparent and merit-based recruitment processes. Applicants with bachelor, master's and doctoral degree qualifications relevant to their academic programmes are hired through transparent processes. Vacant academic positions in the polytechnics were governed by a committee. This was known as an Appointment and Promotions Board. This Board is chaired by the rector and composed of other academic staff members such as the vice rector, deans of schools, heads of departments and the quality assurance officer. The board conducts face-to-face interviews with all short listed applicants, and selected applicants who would enact their quality assurance ideas. This procedure enabled the polytechnics to minimise discrimination and offer equal opportunities for persons interested in pursuing a career in the polytechnic sector. Respondents C1 and S1 said:

> Academic staff recruitment is not done by one person in this polytechnic. It is undertaken by an Appointment and Promotions Board. This helps us to ensure the process is genuine (Interviewee C1).

> An applicant goes through a rigorous process before he/she is recruited. The Appointments and Promotions Board through their activities are able to select applicants who can enact this polytechnic's mission (Interviewee S1).

These responses were cross-checked with respondents C1 and S1's polytechnics recruitment and selection policies. The policy document in Respondent C1's polytechnic indicated that the Appointment and Promotions board is established to ensure impartial recruitment processes to allow the polytechnic to select a candidate suitable for a vacant position. In the case of respondent S1's polytechnic, the policy pointed that the Appointment and Promotions board has been instituted to guarantee the recruitment

of quality academic staff to fill vacancies. It is clear that these initiatives undertaken by the polytechnics are in line with best recruitment practices advocated in literature (Raghavi & Gopinathan, 2013; Stoilkovska, Ilieva, & Gjakovski, 2015).

Staff induction

One-third of the polytechnics (B, T, KF) involved in this study through their registry, organised induction programmes to enhance the transition of academic staff into their institutions. They used the induction programmes to explain the history, mission, culture, core values and approved methods of teaching and assessment of their polytechnics. Through induction, they informed the newly appointed academic staff about their institutions' quality culture. This assisted newly recruited staff to navigate their polytechnics' environment easily, understand their roles better and perform them according to the standards cherished by their polytechnics. Respondents B1 and T3 gave these illustrations:

> The culture of the polytechnic is disclosed to staff at their induction. They are made to understand that this is a teaching place. We also explain the accepted teaching and assessment methods that are used to enhance teaching and learning in this school at the induction programme (Interviewee B1)

> I present the mission of this institution to the staff at their induction. Through this I make them aware of the broad goals of this polytechnic. This guides them in the performance of their roles in this school (Interviewee T3).

These findings affirm the claims of van Vianen and De Pater (2012) that organisations use induction to initiate newcomers into their basic values and behavioural repertoires. This according to Saks and Gruman (2012) has been established to be effective for imparting socialisation content to staff. However, van Vianen and De Pater (2012) further cautions that, the extent to which newcomers experience fit with their new organisation may not

depend only on an organisation's socialisation efforts but also on newcomers' own characteristics and behaviours.

Staff rules and regulations

Almost all the polytechnics applied rules and regulations as a quality assurance strategy. Their rules and regulations governed academic programme design except three polytechnics whose rules focused on student assessment. On the rules and regulations governing programme design these are the explanations respondents K1 and C2 gave:

> The polytechnic has procedures one has to follow before he/she can introduce a new course. We have captured this in a form of template and all the portions need to be answered before it is forwarded to the appropriate authorities for action (Interviewee K1).

> We have procedures for review and approval for our academic programmes. Proposals on new academic programmes are scrutinized and approved at the department, faculty and academic board if they fell within the overall mission of the polytechnic (Interviewee C2).

The authenticity of these responses was checked from the academic board minutes on procedures for course design in these polytechnics and this was affirmed. These polytechnics ensured academic staff followed accepted procedures when designing academic programmes in the form of templates. Importantly, the proposed academic programme had to complement the mission of the polytechnic. Polytechnic T's mission statement read *"……shall be dedicated to advanced instructional delivery in engineering and applied sciences through competency-based teaching approaches"*. Through this strategy, these polytechnics ensured their academic programmes included strong practical components. This prevented them from offering academic programmes similar to traditional universities which is more theoretical. This discovery is similar to course design procedures in some renowned higher education

institutions in the Global North (The University of Edinburgh, 2016; Victoria University, 2013). These institutions require a proposer of a new course via a template, to address: the rationale for the new course, including its place in the programme; clear link between the course, learning objectives and assessment and confirmation that the course content does not overlap with another similar course.

With regards to the rules related to student assessment, the polytechnic required lecturers to submit their end-of-semester examination questions for internal and external moderations. Marks and grades awarded to students were moderated by their quality assurance department before publication. This technique was mostly followed by the long established polytechnics who seems to be well-resourced. Respondent K3 remarked:

> End of semester marks and grades submitted by teachers have to be cross checked and approved by our quality assurance department before they can be published. This has brought transparency in the marking of students 'examination papers.

Respondent K3's explanation is shared by the respondents in the other two polytechnics. The polytechnics used these to improve the quality of education they offered students and help reinforce integrity of qualifications awarded. This corresponds to the views of authors such as Bloxham, (2009) and The Scottish Government (2011). They argue that moderation ensures that an assessment outcome is valid, fair and reliable and that marking criteria have been applied consistently.

Staff formal appraisal methods

The majority of the polytechnics (KF, C, S, T, A, H) conducted formal appraisals for academic staff. Though their commitment to this exercise seems to differ according to how well resourced a polytechnic is, they all administered questionnaires through departmental heads and students to evaluate staff job knowledge

and personal behaviours against established standards. Participants B3 and A3 gave these illustrations:

> We use formal appraisal to measure the level of our teachers' knowledge in their subject area, the strategies they use to deliver their lessons and how they communicate with their students effectively (Interviewee B3).

> Teachers are appraised by their students at the end of the semester. They filled a questionnaire on each teacher as a form of assessment. This had made most of the teachers to be serious about their work (Interviewee A3)

The polytechnics undertook this exercise to identify teachers who fell short of their standards and provided them with additional training. For example, staff in Polytechnic "A" identified to lack teaching skills were offered seminars and workshops on topics in higher education teaching and assessment. This approach corresponds with Niemi and Kemmis (2012) view that appraisal is a powerful means to assure quality in higher education institutions.

Staff workshops and seminars

The requirements of academic staff change continuously and the contexts in which they teach change so no matter how good teachers' pre-service education is, it cannot prepare them for all the opportunities and challenges that arise throughout their careers (OECD, 2011). This notion might have underpinned the quality assurance strategies adopted by almost all the polytechnics involved in this study. Four polytechnics (S, C, A, H) indicated they organised workshop and seminars for academic staff to improve teaching. They pointed out that they organised workshops on pedagogy and hired professors from Ghanaian public universities to provide staff with pedagogical approaches and quality assessment practices to enhance teaching effectiveness. One respondent H3 expressed his views this way:

> We organise workshops on pedagogy and assessment every academic year and hire experts to teach our teachers. This is helpful because it has improved the way teachers deliver lessons in this polytechnic.

Respondents in polytechnics S, C and A held similar views. Two other polytechnics (T and B) had different purposes for organising workshops and seminars in their institutions. The respondent in polytechnic B indicated they undertake this exercise to develop the research skills of their academic staff whilst the other respondent in Polytechnic T confirmed that they use these programmes to reinforce their polytechnics norms and standards. Respondents from polytechnics T and B gave these illustrations:

> We use workshops to re-echo this polytechnic's teaching norms. We emphasize that this polytechnic forbids routine late attendance to class and awarding of marks to students based on teachers own personal discretion (Interviewee T1).

> We organise seminars and workshops on appropriate ways to generate scientific knowledge and publish. We hire a professor from the University of Ghana to facilitate this programme. This has generated interest in research amongst staff. Most of my teachers are now publishing in journals even though these are low quality journals, I think this shows their interest in academic writing is now growing (Interviewee B3).

These findings accord with the views of Livingston (2012). Livingston argues that teachers need to continually revise and enhance their knowledge and skills as well as teaching and learning approaches.

Further studies for staff

Nearly all the polytechnics who participated in this study used higher degree study to increase the discipline knowledge of academic staff and improve teaching. Ideally, an academic possessed bachelor and master's degree qualifications relevant to the academic programmes a polytechnic offers. However, due to

difficulty in recruiting staff who possess masters degrees especially in academic fields which are practically oriented (Amanianpong, 2014), some polytechnics offered appointments to applicants with bachelor and master degrees but in different academic fields. Such qualifications are referred to as "skirt and blouse" in the Ghanaian polytechnic sector and were common amongst staff in the engineering, construction and technology departments of some newly established polytechnics. A respondent B1 made this remark:

> We sometimes find it difficult to get teachers with master's degrees in special fields such as Civil Engineering and Building Construction, so we sometimes employ those with bachelor degree and sponsor them to obtain masters degrees to make them fit to teach here.

Equally, about two-thirds of the polytechnics advanced the view that they offered Bachelor of Technology and Masters programmes in collaboration with Ghanaian and overseas universities. Because of this, they required staff with higher qualifications than masters. These institutions approved for staff to pursue masters and doctoral degrees in universities in Ghana and overseas. They used this to equip these staff with additional and advanced knowledge in their fields. As noted by Livingston (2012), academic staff needs to be supported in learning to enable them to acquire new subject knowledge and utilise new pedagogical approaches. Respondent T1 made the comment below. This was similar to the remarks of other participants in the remaining polytechnics:

> We are currently running Bachelor of Technology and Masters programmes with other universities in Ghana and overseas. Because of this we had to boost the capacity of our lecturers. We sponsored some of them to go for doctoral studies.

Short training courses for staff

Most of the polytechnics (KF, H, T, A,) used short training courses to enhance the efficiency of academic staff. These short courses were run by universities and professional bodies and lasted between

one and three weeks. Some polytechnics used this strategy to provide staff with leadership skills. Participant KF3 explained:

> We enrol most of our teachers in short courses for them to up-grade themselves. Recently we allowed two Heads of Departments to attend a short training course on leadership to improve their leadership skills.

Other polytechnics, totalling three (S, B, C) used short courses to provide staff with additional knowledge in their discipline. They enrolled staff especially those in engineering in short courses to improve their technical competencies. This is how a respondent S1 explained:

> We used short training courses to expand the experiences of our staff. Last time we enrolled one teacher in the Civil Engineering Department in a short training course on Geographical Information Systems and Remote Sensing. This makes our teachers always to be well informed in their study area.

This is in line with Wahr (2010) position that training courses designed specifically to address the needs of staff within their discipline mitigates barriers to learning. This view is highly espoused in literature (Healey & Jenkins, 2003; Taylor, 2006).

Transparent and merit-based students' recruitment

All the polytechnics (A, T, S, B, H, KF, K, C) who participated in this study had strategies to recruit qualified students. Qualified students were applicants who possessed credit in English language, Mathematics, Integrated Science/Social Studies and relevant electives in Senior Secondary School Certificate Examination (SSSCE) or West Africa Secondary School Examination (WASSCE). As part of quality assurance strategies, student admissions in the polytechnics were facilitated by a Joint Admission Committee composed of the registrar, assistant registrar academic and all the heads of departments. The committee met and discussed the number of applications each department received.

They scrutinized and ranked applicants and made decisions based on merit. This strategy allowed them to offer admissions to students whose qualifications were in line with their standards and also maintain fairness and equity. Respondents H1 and KF2 gave these narrations:

> Student admissions in this polytechnic are done by the Joint Admissions Committee. They scrutinize the applications received by all the departments and take decisions on them based on the polytechnic's admission criteria (Interviewee H1).

> We have measures that help us to recruit quality students. Student admission is done by a group of academics with the registrar as the head. They select qualified applicants for our academic programmes (Interviewee KF2).

Student orientation

Students on arrival on campus were subjected to socialisation by all the polytechnics. Though their orientation practices varied widely, their orientation programmes basically educated students on the mission of the polytechnics, the polytechnics norms, teaching, employability and campus life. For example, on the polytechnic norms a section of the polytechnic concentrated on ethical behaviours. This is how respondent B2 explained. This illustration was similar to the other polytechnics:

> We inform our students about the important norms of this polytechnic. These are related to drugs, sex on campus and dressing. We explain to them that the polytechnic is strict on these issues because of the negative effects they can have on their studies and career (interviewee B2).

They informed students the use of illicit drugs, illicit sex on campus, and improper dressing on campus were forbidden. Drugs, apart from being illegal, would prevent them from gaining employment and that sexual activities on campus would impact on their studies negatively. Dressing was part of their professional training and dressing appropriately on campus carried to work places of the

future. Orientation is repeatedly credited with smoothening students' transition to campus life (Gill et al., 2011) and improving retention (Ramsburg, 2007) but has also been accused of overloading students with information (Singer, 2003).

Simulated workplace for students

Of the eight polytechnics who were part of this investigation, five (KF2, K, S, T, C) of the polytechnics used simulation experiences as a quality assurance strategy. They indicated lack of internship sites for students to acquire practical skills as the reason. Participants KF2 and K3 remarked:

> Because we don't have enough industries sited in our catchment area it becomes difficult for our students to get internship sites to train there. This has compelled us to simulate workplace settings in our school and train the student there. This enables us to equip our students with practical skills and workplace culture (Interviewee KF2).
>
> Our programme is supposed to be Work Integrated Learning but we struggle to find organizations to partner with so we use simulations to enrich the educational experiences of our students (Interviewee K3).

Aleandri and Refrigeri (2013) argue that vocational qualifications need to match with work requirements and that skill for lifelong learning need to be developed. Through workplace simulations, these polytechnics provided students especially those pursuing engineering programmes, with technical competencies required to gain entry into their occupations and workplace culture. This agrees with Jossberger, Brand-Gruwel, van de Wiel, and Boshuizen (2015) position that workplace simulation is implemented in vocational education institutions to bring professional practice into their training. This clearly suggests that this approach adopted by these polytechnics is in line with best practices in vocational and technical education training.

Student academic counselling

Two-thirds of the polytechnics involved in this research used academic counselling as a quality assurance strategy. They had academic counsellors who provided students with academic advice. The counsellors demonstrated the relevance of academic programmes to students by linking them to real world situations. This was meant to generate students' interests in programmes they were pursuing and improve student retention in the polytechnics because they are perceived by a cross section of Ghanaians to offer low quality training. Respondents K3 and S2 noted:

> Every student in this polytechnic is assigned to an academic counsellor. These academic counsellors interact with our students and stimulate their interest in their academic programmes. This has helped to improve our students' retention rate (Interviewee K3)

> We have assigned academic counsellors to our students. They meet them once in a semester and provide them with the strategies they can adopt to improve their performance in the school (Interviewee S2)

This finding equals Hunter and White (2004) statement that academic counselling can help students to shape meaningful learning experiences, thus encouraging achievement of educational, career, and life goals. Without quality academic counselling, students may master course content, yet still be at risk of dropping out if they fail to develop adequate academic self-confidence, academic goals, institutional commitment, achievement motivation, and social support and involvement (Lotkowski, Robbins, & Noeth, 2004).

Student disciplinary associations

Students' disciplinary associations in the polytechnics contributed in enhancing the quality of educational experiences the polytechnics' offered students. Prominent amongst these

associations are: the Association of Higher National Diploma Secretaryship and Management Students, Polytechnic Engineering Students Association of Ghana and Association of Polytechnic HND Accountancy Students. One-third of the polytechnics through this means provided students with additional knowledge in their field of study. Respondent B1 disclosed:

> The Association of Higher National Diploma Secretaryship and Management Students organised workshop for their members during their week celebration. They brought an expert to train their members on telephone etiquette.

Similarly, participant T1's polytechnic used this channel to provide his students with additional knowledge and skills in civil engineering. The Polytechnics' Engineering Students Association of Ghana (PESAG) in his polytechnic organised seminars and invited guest from industry to speak on Building Information Modelling (BIM) and automation in construction. Respondent T1 narrated:

> The Polytechnic Engineering Students Association of Ghana (PESAG) organized seminars and invited speakers from the construction industry to speak on the application of software in the engineering industry.

This allowed students to gain practical knowledge in line with the missions of their polytechnics. This conforms with Janosik (2009) position that discipline associations and the activities connected with them can provide the needed skill development to enhance a new professional's repertoire of competencies.

Student graduation ceremonies

Most of the polytechnics used graduation ceremonies to affirm their quality assurance techniques but the way they organised this programme differed. Through the ceremony they confirmed the graduates as newly qualified professionals. This indicated that the socialisation of their graduates was complete and affirmed that the

polytechnics' graduates were quality assured. A respondent H1 remarked:

> My polytechnic organizes congregation for the graduates and award them their diplomas to signify that they are ready for the job market (Interviewee H1).

This finding is aligned with the stance of the University of Western Sydney (2016), which views the graduation ceremony as an important event for marking the formal end of study and also projecting students as well prepared for the job market. However, Allen and van der Velden (2007) argue that graduating from a higher education institution does not automatically imply that one possesses the skills and knowledge necessary for their chosen career. This holds true in the Ghanaian polytechnic education sector because polytechnic graduates are often tagged as low quality by a section of the Ghanaian public (Ghana National Union of Polytechnic Students, 2012) irrespective of pronouncements of Rectors of Ghanaian polytechnics about their graduates' preparedness for their chosen career during their graduation ceremony.

Alumni tracer studies

Less than half of the polytechnics who participated in this study used tracer studies to improve the quality of education they provide. They monitored their students after graduation to establish links between the occupational socialisation they offered them and job market requirements. They administered questionnaires to graduates to obtain feedback on their performance in the labour market. They also enquired from their graduates their employment status, their occupation and the relationship between their occupation and the academic programmes they had pursued in the polytechnic. The results of these studies were factored into their polytechnics academic programme review. Respondents H2 and KF2 illustrated it this way:

> We track our students to find out whether they are employed, the type of work they are doing and the usefulness of the training they had in this school to their current job. This helps us to review our academic programmes to make them relevant to the current demands of the labour market (Interviewee H2).

> We conduct tracer studies in this polytechnic at certain times and use the feedback to improve the programmes we run to make them relevant to societal demands (Interviewee KF2)

This strategy seems to have helped these polytechnics to reduce the defects in their academic programmes and made them more relevant to labour market demands. This validates Schomburg and Teichler (2011) argument that higher education institutions embraced tracer studies to enable them make informed and evidence based quality improvement decisions. This notwithstanding, available evidence suggests that there is mismatch between study programmes and labour market requirements in the Ghanaian polytechnic sector (Ansah, 2010; Bakah, 2011).

Conclusion

This study has highlighted the internal quality assurance strategies Ghanaian polytechnics implemented in their quest to offer quality vocational and technical higher education. It was evident that internal quality assurance strategies of the polytechnics centred on staff and students. The strategies related to staff covered recruitment, induction, rules and regulations, appraisal, workshop and seminars, further studies and short training courses whilst those for students focused on student admission, orientation, simulated work place, academic counselling, disciplinary associations, graduation ceremonies and alumni tracer studies. These strategies used by the polytechnics seem relevant in their context but were not adequate. Issues related to physical facilities were not taken in consideration by their internal quality assurance strategies. This study recommends that the polytechnics should re-institutionalise their internal quality assurance to focus on physical facilities since they contribute to the quality of education offered by an institution.

References

Adu, K., & Orivel, F. (2006). *Tertiary education financing strategy in Ghana*. Accra: National Council for Tertiary Education.

Aleandri, G., & Refrigeri, L. (2013). Lifelong learning, training and education in globalised economic systems: analysis and perspectives. *Procedia-Social and Behavioural Science, 93*, 1242-1248.

Amanianpong, K. (2014). *Importance of Polytechnic education and the challenges it faces. Retrieved on 10th April 2015 from http://www.graphic.com.gh/news/education/importance-of-polytechnic-education-and-the-challenges-it-faces.html.*

Ansah, F. (2010). Designing self-evaluation instruments for academic programmes: Lessons and challenges. *Evaluation and Research in Education, 3*(16), 136-141.

Ansah, F. (2015). A strategic quality assurance framework in an African higher education context. *Quality in Higher Education, 21*(2), 132-150.

Ary, D., Jacobs, L. C., Sorensen, C. K., & Walker, D. A. (2014). *Introduction To Research in Education* (9th ed.). Wadsworth: Cengage Learning.

Bailey, T., Cloete, N., & Pillay, P. (2011). *Case study: Ghana and University of Ghana*. Cape Town: Centre for Higher Education Transformation.

Bakah, M. A. B. (2011). *Teacher professional development through collaborative curriculum design in ghana's polytechnics*. University of Twente. Enschede.

Bloxham, S. (2009). Marking and moderation in the UK: false assumptions and wasted resources. *Assessment and Evaluation in Higher Education, 3*(2), 209-220.

Bryman, A. (2012). *Social research methods* (4th ed.). Oxford: Oxford University Press.

Cheng, M., Taylor, J., & Tong, K. (2016). Student satisfaction and perceptions of quality: testing the linkages for PhD

students *Higher Education Research and Development, 35*(6), 1153-1166.

Dill, D. (2010). We Can't Go Home Again: Insights from a Quarter Century of Experiments in External Academic Quality Assurance. *Quality in Higher Education, 16*(2), 158-161.

Duwiejua, M. (2015). *Access to higher education in Ghana still elitist: Retrieved on 30th October 2015 from http://www.myjoyonline.com/news/2015/February-2nd/access-to-tertiary-education-in-ghana-still-elitist-prof.php*.

European Association for Quality Assurance in Higher Education. (2009). *Standards and Guidelines for Quality Assurance in the European Higher Education Area*. Helsinki: ENQA.

Friend-Pereira, J. C., Lutz, K., & Heerens, N. (2002). *European student handbook on quality assurance in higher education. The National Unions of Students of Europe. Retrieved on 11th July 2014 from http://www3.uma.pt/jcmarques/docs/info/qaheducation.pdf*.

Ghana National Union of Polytechnic Students. (2012). *Don't attribute your incompetence to HND graduates; GNUPS hacks Slyvester Mensah. Retrieved on 21st November, 2014 from https://www.newsghana.com.gh/dont-attribute-your-incompetence-to-hnd-graduates-gnups-hacks-sylvester-mensah/*.

Gill, B., Ramjan, L., Koch, J., Dlugon, E., Andrew, S., & Salamonson, Y. (2011). A standardised orientation program for first year undergraduate students in the College of Health and Science at UWS: A Practice Report. *The International Journal of the First Year in Higher Education, 2*(1), 63-69.

Gondwe, M., & Walenkamp, J. (2011). *Alignment of higher professional education with the needs of the local labour market: The case of Ghana*. The Hague Netherlands Organisation for International Cooperation in Higher Education (NUFFIC).

Government of Ghana. (1994). *National Board for Professional and Technician Examination Act 492*. Accra: Ghana Publishing Corporation.

Government of Ghana. (2007a). *National Acrreditation Board Act 744*. Accra: Ghana Publishing Corporation.

Government of Ghana. (2007b). *Polytechnic ACT, ACT 745*. Accra: GOG.

Government of Ghana. (2013). *Implementation of the Ghana Shared Growth and Development Agenda (GSGDA) : 2012 Annual Progress Report*. Accra: National Development Planning Commission (NDPC).

Government of Ghana. (2016). *Technical Universities Act 2016 (ACT 992)* Accra: Government of Ghana.

Harvey, L., & Green, D. (1993). Defining quality. *Assessment & Evaluation in Higher Education, 18*(1), 9-34.

Healey, M., & Jenkins, A. (2003). Discipline-based educational development. In H. Eggins & R. Macdonald (Eds.), *The scholarship of academic development* (pp. 47-57). Buckingham: The Society for Research into Higher Education and Open University Press.

Hunter, M. S., & White, E. R. (2004). Could fixing academic advising fix higher education? . *About Campus, 9*(1), 20-25.

Janosik, S. M. (2009). Professional Associations and Socialization. In A. Tull, B. J. Hirt, & A. S. Saunders (Eds.), *Becoming socialized in students affairs administration. A guide for new professionals and their supervisors* (pp. 194-214). Sterling: Stylus Publishing, LLC

Jossberger, H., Brand-Gruwel, S., van de Wiel, M. W. J., & Boshuizen, H. P. A. (2015). Teachers' Perceptions of Teaching in Workplace Simulations in Vocational Education. *Vocations and Learning, 8*(3), 287-318.

Kigotho, W. (2013). Pan-African Quality Assurance and Accreditation Moves. *University World News. Retrieved on 30th August, 2016 from http://www.universityworldnews.com/article.php?story=201306141161617828.*

Livingston, K. (2012). Quality in Teachers' Professional Career-Long Development. In J. Harford, B. Hudson, & H. Niemi (Eds.), *Quality Assurance and Teacher Education: International Challenges and Expectations* (pp. 31-51). Bern: Peter Lang.

Lotkowski, V. A., Robbins, S. B., & Noeth, R. J. (2004). *The role of academic and non‑academic factors in improving college retention: ACT Policy Report. Retrieved on 30th January, 2016 from www.act.org/research/policymakers/pdf/college_retention .pdf*.

Materu, P. N. (2007). *Higher education quality assurance in Sub-Saharan Africa: status, challenges, opportunities and promising practices* (Vol. 124). Washington, D.C: World Bank Publications.

Ministry of Education. (2012a). *Education Finance Brief : Ghana's presentation in Addis Ababa*. Accra: MOE.

Ministry of Education. (2012b). *Education Sector Performance Report (ESPR)*. Accra: MOE.

Ministry of Education Science and Sports. (2010). *Education Sector Performance Report (ESPR)* Accra: MOESS.

National Accreditation Board. (2016). *Tertiary Education Statistics Report: Composite statistical report on all categories of tertiary educational institutions in Ghana for the 2014/2015 academic year*. Accra: National Accreditation Board.

National Council for Tertiary Education. (2012). *Budget report for 2012 academic year*. Accra: NCTE.

National Council for Tertiary Education. (2014). *Report of the technical committee on conversion of the polytechnics in Ghana to technical universities*. Accra: NCTE.

Nenadál, J. (2015). Comprehensive quality assessment of Czech higher education institutions. *International Journal of Quality and Service Sciences, 7*(2/3), 138-151.

Ng'ethe, N., Subotzky, G., & Afeti, G. (2008). *Differentiation and Articulation in Tertiary Education Systems: A Study of Twelve African Countries*. Washington D.C: World Bank.

Niemi, H., & Kemmis, S. (2012). Communicative Evaluation for Improvement in Education In J. Harford, B. Hudson, & H. Niemi (Eds.), *Quality Assurance and Teacher Education* (pp. 53-82). Bern: Peter Lang.

Njoku, P. C. (2012). The Quality Assurance Situation and Capacity-Building Needs in Anglophone West African Countries. In G. B. Alabi & J. C. Mba (Eds.), *The Quality Assurance Situation and Capacity Building Needs of Higher Education in Africa* (pp. 17-55). Accra: Association of African Universities.

Odhiambo, G. O. (2014). Quality assurance for public higher education: contexts, strategies and challenges in Kenya. *Higher Education Research and Development, 33*(5), 978-991.

OECD. (2011). *Building a High-Quality Teaching Profession* Paris: OECD.

Oyewole, O. (2012). Developing quality assurance systems in African universities: AAU initiatives. In G. B. Alabi & J. C. Mba (Eds.), *The quality assurance situation and capacity building needs of higher education in Africa* (pp. 1-16). Accra: Association of African Universities.

Raghavi, K., & Gopinathan, N. (2013). Role of Human Resources as Change Agent in Enabling Equal Opportunity Practices. *Journal of Economics, Business and Management, 1*(3), 300-303.

Ramsburg, L. (2007). Strive for success: A successful retention program for Associate of Science in Nursing students. *Teaching and Learning in Nursing, 2*(1), 12-16.

Rosa, M. J., & Amaral, A. (Eds.). (2014). *Quality Assurance in Higher education: Contemporary debates*. Basingstoke: Pelgrave Macmillan.

Saks, A. M., & Gruman, J. A. (2012). Getting Newcomers On Board : A Review of Socialization Practices and Introduction to Socialization Resources Theory. In C. R. Wanberg (Ed.), *The Oxford Handbook of Organizational Socialization* (pp. 27-55). New York: Oxford University Press.

Schomburg, H., & Teichler, U. (Eds.). (2011). *Employability and Mobility of Bachelor Graduates in Europe: Key Results of the Bologna Process*. Rotterdam: Sense Publishers.

Singer, W. (2003). The role of the campus visit and summer orientation program in the modification of student expectations about college. *Journal of College Orientation and Transition, 10*(2), 52-59.

Stoilkovska, A., Ilieva, J., & Gjakovski, S. (2015). Equal Employment Opportunities in the Recruitment and Selection Process of Human Resources. *UTMS Journal of Economics, 6*(2), 281–292.

Taylor, K. (2006). Autonomy and self-directed learning: A developmental journey. In C. Hoare (Ed.), *Handbook of adult development and learning* (pp. 196-218). Oxford: Oxford University Press.

Teferra, D. (2013). Funding Higher Education in Africa: State, Trends and Perspectives. *Journal of Higher Education in Africa 11*, 19-51.

The Scottish Government. (2011). *Curriculum for excellence building the curriculum 5 a framework for assessment*. Edinburgh: The Scottish Government.

The University of Edinburgh. (2016). *Programme and Course Approval and Managemennt*. Edinburgh: The University of Edinburgh.

UNESCO. (2010). *Trends in Tertiary Education: Sub-Saharan Africa- UIS Fact Sheet, December 2010, No.10: Retrieved on 10th June, 2016 from http://www.uis.unesco.org/Library/Documents/fs10-trends-tertiary-education-sub-saharan-africa-2010-en.pdf*.

University of Western Sydney. (2016). *Graduation Ceremonies. Retrieved on 11th September, 2016 from https://www.westernsydney.edu.au/graduation_ceremonies/graduating*.

van Vianen, A. E. M., & De Pater, I. E. (2012). Content and Development of Newcomer Person-Organization Fit : An Agenda for Future Research. In C. R. Wanberg (Ed.), *The*

Oxford Handbook of Organizational Socialization (pp. 139-157). New York: Oxford University Press.

Victoria University. (2013). *Academic Approvals Handbook*. Wellington: Victoria University of Wellington.

Vroeijenstijn, A. I. (1995). *Improvement and accountability: Navigating between Scylla and Charybdis - Guide for external quality assurance in higher education*. London: Jessica Kingsley.

Wahr, F. (2010). *Attempting to decolonise academic development – designing an action learning approach to integrate sustainability into the higher education curriculum*. Paper presented at the 8th World Congress 2010 Participatory Action Research and Action Learning, 6th-9th September, 2010 at Melbourne, Australia.

Woodhouse, D. (2006). *Quality = Fitness for Purpose (FFP): definition for all seasons.* Paper presented at the APQN Conference on Cooperation in Quality Assurance, Shanghai, 1-4 March, 2006.