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Editorial

Six papers from studies on Higher Education in Ghana are presented in this sixth volume of the *Ghana Journal of Higher Education*.

In the first paper, Emmanuel Newman traces the developmental path of the Technical Universities from the time of their establishment as polytechnics. The study discusses issues that may have accounted for mission drift and isomorphism in polytechnics and technical universities. The author identifies some strategies which could be adopted to foster the fulfillment of the mission and mandate of the technical universities and contribute to the creation of a diversified tertiary education sector in Ghana.

Effective higher education management and administration are key to the development of tertiary education. The challenges confronting higher education management in general and in particular, Ghana, call for new ways of managing the system. Using the administrators of Kwame Nkrumah University of Science and Technology (KNUST) as case study, Vincent Anum Ankamah-Lomotey and Benedicta Kwakye examine some shifts and challenges in higher education management and what strategies could be adopted by the university administrator to ensure an efficient and effective management system in the second paper.

The learning environment for higher education has largely been a “face-to-face” interaction between students and teachers at a physical site. However, higher education in the 21st Century is gradually adopting new modes of delivery that depend on technology and technological advancement to achieve expected goals. Ernest Adu Gyamfi and Paul Kwadwo Addo in the third paper, present a report on a study conducted on how the diverse beneficiaries of distance learning perceive quality. They discuss its implications for educational administration. They further argue that the traditional mode of delivery has not only been inadequate to match the changing trends on the higher education landscape, but has also proved unsuccessful in providing adequate access to higher education seekers in some instances.

In the fourth study Marie Bakah and Samson Amponsah seek to find out the factors that contribute to occupational stress among administrative assistants of a public university in Ghana and the coping

strategies adopted by the staff to deal with stress-related problems. They conclude that *improving* the work environment can decrease the risk of illness of all employees thereby reducing the rate of stress.

Hope Pious Nudzor sets out to determine the variables employers consider in employing graduates of the Institute for Educational Planning and Administration (IEPA) in the labour market to enable them contribute their quota towards Ghana's developmental goals in the fifth paper. He argues that since its establishment, the IEPA has contributed and continues to contribute significantly towards the development of Ghana. This is particularly evident in the leading role it plays in the preparation of graduates for careers within the Ghana education sector and other sectors of the general economy.

In the sixth and final paper, Eric Osei-Assibey and Cynthia Adu investigate the different socio-economic factors that influence the academic performance of adult learners' in entrance examinations into universities. The study uses 731 mature applicants as a case study. The findings have an important practical implication for designing an appropriate mature applicant access programme that suits applicants from diverse socio-economic backgrounds and contributes to better academic performance.

Evolution of Technical Universities: Challenges and Causes of Mission Drift

EMMANUEL NEWMAN

Abstract

The paper discusses the events and issues that had led to the elevation of polytechnics to technical universities in Ghana. It traces the developmental path of the institutions that have been designated as technical universities from the time of their establishment as polytechnics to the present. Issues that account for mission drift and isomorphism in polytechnics/technical universities are also discussed. We conclude that agitations by staff and students, changes engendered by the senior management of polytechnics, the structure of the Ghanaian economy and regulatory weakness are responsible for mission drift in polytechnic/technical university education and isomorphism in the tertiary education sector. Strategies to obviate mission drift and isomorphism are assessed to foster mission fulfillment in technical universities and promote a diversified tertiary education sector in Ghana.

Introduction

In 1963 three technical institutes in Takoradi, Kumasi and Accra were designated as polytechnics as part of wide-ranging reforms to the education sector during the postcolonial era to provide middle-level manpower development in Ghana. The then polytechnic institutions were not tertiary institutions. They operated as advanced secondary schools, which could be placed on the level 4 on International Standard Classification of Education, 2011.

In the early 1990s, the polytechnics were elevated to tertiary institutions as part of reforms to the tertiary education sector. The White Paper on the reforms to the Tertiary Education System (1990) provided that the nation would achieve a better balance between the supply of higher level and technician level personnel and that programmes and courses for advanced technician training would be introduced in appropriate tertiary institutions. Additionally, the White Paper stated that polytechnics had a distinctive role to play in middle level manpower development.

Programmes and courses were to be offered at the higher middle level of technician training leading to advanced practical training to complete the cycle of technical education and provide a capacity for higher level technician training and practical research (GOG, 1990). In this regard, polytechnics were elevated to tertiary institutions with the proclamation of the Polytechnic Law, 1992. Polytechnics were mandated to provide tertiary education in the field of manufacturing, commerce, science, technology, applied social science and applied arts. They were also to encourage study in technical subjects at tertiary level and provide opportunities for development, research and publication of research findings (GOG, 1990). The Polytechnic Law 1992 endowed polytechnics with the powers to award certificates and diplomas agreed upon by their Councils with the National Board for Technical and Professional Examinations Board and award degrees under conditions directed by the authority responsible for higher education.

In 2007, the Polytechnic Act, 2007 (Act 745) was enacted to enable polytechnics to award certificates and diplomas accredited by the National Accreditation Board and award degrees subject to conditions determined by their Councils.

Finally, in 2016, the Technical Universities Act was enacted to convert polytechnics into technical universities and empower them (Technical Universities) to award degrees; and offer Higher National Diploma programmes approved by the National Council for Tertiary Education, accredited by the National Accreditation Board, and examined and certified by the National Board for Professional and Technician Examinations to complete the evolution of Polytechnic institutions in Ghana (GOG, 2016).

Statement of the Problem

Since the establishment of polytechnics, staff and students had agitated for changes in the sector often making the universities their point of reference. The changes the staff and students agitated for concerned conditions of service of staff, placement of students in the public sector and other challenges that impinged on teaching and learning. Consequently, staff and students embarked upon agitations to back demands for changes in conditions of service and better placement in the public service respectively. Other issues raised by stakeholders

concerned mission fulfillment in polytechnic/technical universities including the profile of staff and students recruited to polytechnics/technical universities, and the acquisition of resources for the organisation of advanced professional, technical and vocational education.

During the reorganisation of the tertiary education system in the early 1990s, it was determined that Ghana would have a dual tertiary education system comprising polytechnics and universities. Polytechnics were expected to provide facilities for professional and advanced vocational and technical education to meet the training aspirations of a developing economy. However, agitations by staff and students of polytechnics arising basically from incessant comparison of polytechnics with the universities coupled with actions and inactions of the management of polytechnics as well as regulatory weakness led to the dissimulation of the mandate of polytechnics now turned into technical universities. These challenges have apparently led to mission-drift in polytechnic/technical universities and loss of diversity and differentiation in tertiary education with concomitant effects on the supply of technically competent labour.

The Goal

The goal of this work is to examine the issues that prompted the changes in polytechnic education since they were established in 1963. Our intention is to examine the critical issues in polytechnic education at every stage of the evolution of polytechnics to Technical Universities; assess the factors that impinged on the execution of the mandate of polytechnics since their establishment and make recommendations to prevent mission-drift in Technical Universities.

The work involves qualitative analyses of the challenges and the factors behind the changes in polytechnic education since their establishment in 1963. It involves the analyses of policy documents, reports, press releases and pronouncements of the leadership of staff and students of polytechnic institutions. Discussions were held to collect the viewpoints of six Rectors/Vice-Chancellors and three senior managers of polytechnics on the subject matter. The work benefitted from the author's observation of the activities of the National Council for Tertiary Education in the polytechnic sector over a decade.

Conceptual and Theoretical Overview

Technical and Vocational Education refers to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life (UNESCO, 1987).

Technical education refers to the academic and vocational preparation of students for jobs involving applied science and modern technology. It emphasizes the understanding and practical application of basic principles of science and mathematics, rather than the mere attainment of proficiency in manual skills which is properly the concern of vocational education (see www.britannica.com/topic/technical-education).

Polytechnics are tertiary education institutions that provide facilities for teaching and learning in a range of technical and vocational disciplines. The polytechnics are to encourage study in technical subjects at the tertiary level and provide tertiary education through full-time courses in the field of manufacturing, commerce, science, technology, applied social sciences, and applied arts (MOE, 1990).

Technical universities or universities of technology focus on the study of application of technology to the various fields of human endeavour. Technology in this regard refers to "... the know-how and creative processes that may assist people to utilise tools, resources and systems to solve problems and enhance control over the natural and made environment in an endeavour to improve the human condition" (UNESCO, 1985, quoted by Du Pre, 2010, p.10). Technical universities are different from traditional/classical universities in that they (technical universities) focus on vocational, technical and professional education and applied research, and thus, concentrate on the application of technology to the fields of learning (Du Pre, 2010, Afeti *et al.*, 2013).

Mission Drift Tertiary Education

Tertiary education institutions are established with clear expectations of their role in the education sector. Thus, if institutions assume other functions, which substantially affect the execution of their original

mandate, the institution is said to have drifted from its mission. Longanecker (2008) states that higher education values a hierarchy of institutions and this entices an institution to wish to expand or redefine its mission to move up the hierarchy. In assessing the phenomenon of mission drift in higher education in the United States, Longanecker (2008) stated that “we see increasing pressure behind mission creep – community colleges seeking to become baccalaureate colleges, baccalaureate colleges seeking to become universities, modest universities seeking to become significant research universities, and research universities seeking to become world class”(p.3). Consequently, the basic premise of mission drift is that institutions that are on the lower strata of hierarchy of institutions in higher education seek to appropriate the functions and identity associated with the prestigious institutional types. Gonzales (2013) notes that faculty members are deeply involved in the drift of institutions. Indeed, faculty seek to remake less research focussed and hence less prestigious places into the elite research institutions where they have been trained (Gonzales, 2013).

The consequence of mission drift is the loss of focus on the original mandate of tertiary institutions — often institutions jettisoning the mandate of providing vocational and technical education in favour of programmes of less practical nature. Longanecker (2003) notes that mission drift leads to the loss of teaching productivity; loss of focus on providing vocational education, loss of diversity in higher education and high cost of providing higher education.

Main Findings

Polytechnics as Upper Secondary Schools — Pre-1990s Polytechnic Education

The rationale for elevating the three technical institutes to polytechnics in 1963 was to create avenues for progression for students who had completed pre-technical courses and train a corps of technicians with advanced skills. Thus, students who had successfully completed the pre-technical course in technical institutions proceeded to non-tertiary polytechnics to either pursue General Course Examination in Engineering or Building, or to the Advanced City and Guilds of London

Institute Craft courses in mechanical, electrical or building (Kofi *et al.*, 1990).

Polytechnics also offered full-time courses to successful general course students leading to the Ordinary Diploma in Mechanical and Electrical Engineering. Later on, courses leading to the Mechanical Technician Certificate with production or plant maintenance option, Electrical Engineering Technician Certificate or Construction Certificate were added. Full-Time Courses in Institutional Management and Business studies with secretarial and accounting options were also added (Kofi *et al.*, 1990).

During the 1970s, polytechnics concentrated on technician programmes and offered advanced craft courses on part-time basis. Courses at polytechnics ranged from pure and applied science, statistics, mechanical, electrical and electronic engineering, building construction, business studies and professional courses in accounting, banking, secretaryship and catering (Kofi *et al.*, 1990).

Issues in the Pre-1990s Polytechnic Education

Polytechnics for a long time remained second cycle institutions and operated under the supervision of the Ghana Education Service. There was a pervasive notion that polytechnic education provided an opportunity for students who failed to gain admission into sixth form. Levels of the courses offered were not up to tertiary standard. In fact, polytechnics offered craft courses and lower technician programmes only — ordinary diplomas and intermediate qualifications of some professional bodies (Ministry of Education, 1990).

The then polytechnics faced several challenges. Sutherland-Addy *et al.* (1987) stated that the decision of the government of the day to upgrade the polytechnics, though sounded well, was sudden and not supported by the needed resources such as staff, equipment and relevant curricular. Courses and programmes offered by the polytechnics lacked broad training in the areas of science, technology and computations. English language was also not emphasised as a course. Levels of qualification and competencies of staff were generally low; and facilities were not adequate for running post-secondary level courses. Additionally, there was inadequate system of examinations. Apart from Institutional Management in Catering, Secretarial, and Business courses,

which were examined by the Technical Education Division of the GES, the City and Guilds of London Institute assessed most of the courses offered by the polytechnics externally (Honyenuga, 2013).

The effect of this was that, instead of learning to solve Ghana's, and for that matter Africa's, socio-economic problems, the curricula were tailored to address British socio-economic issues (Honyenuga, 2013).

Polytechnics as Non-University Tertiary Institutions

In the early 1990s, the polytechnics were elevated to tertiary institutions as part of reforms to the tertiary education sector. The White Paper on the reforms to the Tertiary Education System, 1990, provided that the nation intended achieving a better balance between the supply of higher level and technician level personnel. Programmes and courses for advanced technician training would be introduced in appropriate tertiary institutions.

The White Paper further stated that polytechnics had a distinctive role to play in middle level manpower development. Programmes and courses were to be offered at the higher middle level of technician training leading to advanced practical training to complete the cycle of technical education and provide a capacity for higher level technician training and practical research (GOG, 1990). In this regard, polytechnics were elevated to tertiary institutions with the proclamation of the Polytechnic Law 1992 to enable polytechnics provide tertiary education in the fields of manufacturing, commerce, science, technology, applied social science, applied arts, encourage study in technical subjects at tertiary level and provide opportunities for development, research and publication of research findings (GOG, 1990). The Polytechnic Law 1992 empowered polytechnics to award certificates and diplomas agreed upon by their Council with the National Board for Technical and Professional Examinations Board and award degrees under conditions directed by the authority responsible for higher education.

Issues in Post 1990 Polytechnic Education

Many issues confronted polytechnics after their elevation to tertiary status. Effah (2005) stated that polytechnics started with a number of

teething problems — inadequate preparation, weak leadership, blurred vision, crisis of identity, inadequate infrastructure to the extent that not many people and organisations wanted to identify with them. Alabi (2012) stated that the poor public perception of polytechnics as second-rate tertiary institutions, inadequate public funding, inadequate facilities, poor conditions of service for polytechnic staff, among others, all contributed to the challenges facing polytechnics.

Public image of TVET in Ghana was generally poor. Technical and vocational education was perceived as inferior to the purely academic type of education and reserved for the less academically endowed (Afeti and Mireku-Gyimah, 2003). Afeti (2002) also stated that the low public esteem of vocational and technical education and colonialist-inspired value system that unduly exalts the university degree as the ultimate academic attainment was responsible for the poor public perception of non-university tertiary institutions.

The philosophy and orientation of polytechnic education has often been confused with that of university education and misunderstood even by a section of the staff and students of the polytechnics themselves. As a result, the practical nature of polytechnic programmes has been obscured and unhelpful comparisons have been made regarding the comparative work of the graduates from the two systems of educational institutions (Afeti and Mireku-Gyimah, 2003).

Budu-Smith (2005) stated that instead of their complementary role to the universities, polytechnics appear to have lost focus of their important role in training high level technical human resources and seem to follow in the shadows of the universities by comparing their staff designations, operations and salary levels to those of the universities.

The labour market demand for polytechnic graduates appears to be weak (Afeti and Mireku-Gyimah, 2003). The NCTE (2001) noted that most polytechnic graduates have difficulty in getting jobs, obviously due to the lack of clarity on the part of employers about the capability of the HND holder in most cases, employers find difficulty in appropriately placing graduates of the polytechnics within the scheme of operations (NCTE, 2001). Boateng and Ofori-Sarpong (2002) indicated that employers in Ghana generally discriminate against the holders of polytechnic qualifications because of uncertainty about quality and hence placement on the job hierarchy. A survey by JICA indicated

that nearly 30% of polytechnic graduates are unable to find jobs on the domestic market. This apparent lack of career prospects for polytechnic graduates as well as the lack of clarity regarding prospects for further education of graduates of polytechnic institutions gained national attention and became topical in the early and mid-2000s. These issues culminated in student agitations with the demand for clearer pathway for their academic progression (Newman, 2013; Nyarko, 2011). According to Afeti (2002), the students embarked on a series of street demonstrations and a 10-week boycott of lectures to demand the creation of opportunities for them for further education or what they described as “academic progression” at the university level.

Poor conditions of staff made it impossible to recruit top management staff from industry (Afeti and Mireku-Gyimah, 2003). Nyarko (2011) notes that the issue of poor conditions of service has been a recurring battle cry for the staff of the polytechnics. The issue of poor remuneration has remained the Achilles heel of the polytechnic staff vis-à-vis their counterparts in analogous institutions.

Girdwood (1999) states that resourcing levels in polytechnics were clearly inadequate. Indeed, Effah (2005) stated that when polytechnics were elevated to tertiary institutions, the minimum resource requirements necessary for their upgrading were not met. He stated further that under-resourcing was, without doubt, one of the major challenges facing polytechnic institutions. Government subvention for polytechnic institutions has over the years been lower than the assessed requirements for the training of students and that the situation is worsened by the fact that the cost of starting and running any TVET system is high. Levels of funding are inadequate to support effective and credible polytechnic education (Afeti and Mireku-Gyimah, 2003). The level of underfunding of polytechnics could be measured by the fact that costs were four times higher than the funding made available to polytechnics (Afeti and Mireku-Gyimah, 2003). Nyarko (2011) stated that the polytechnics were upgraded into tertiary institutions without the necessary funding and other resources. For example, Government expenditure per polytechnic student in 1990 was US\$168 as compared to US\$2100 per university student. This actually fell to US\$74 per polytechnic student by 1998 during which time that of the University student fell to US\$900. By 2005, the situation had improved to about

US\$1000 per polytechnic student as against US\$2500 per university student.

Polytechnic curricula have remained essentially the same in content and orientation for the past ten years. There is widespread perception that polytechnic training programmes are outdated and out of tune with the current demands of the labour market. The existing curricula is not industry-driven. They are heavily based on overseas (UK) models with little or no adaptation to reflect local conditions (Afeti and Mireku-Gyimah, 2003).

Nyarko (2011) stated that polytechnics faced serious staffing problems when they were upgraded from second cycle institutions to tertiary institutions. Inadequate qualified and professional staffing presented problems for teaching, learning and research. Polytechnics started with the few Ghana Education Service staff who opted to remain with the polytechnics at the time the polytechnics were upgraded to tertiary status (NCTE, 2001). The majority of the staff lacked the requisite levels of industrial or practical experience necessary for imparting relevant workplace knowledge and skills to students (Afeti and Mireku-Gyimah, 2003).

No effective dialogue or collaboration currently exists between the polytechnics and industry (Afeti and Mireku-Gyimah, 2003). No formal links have been established with industry for upgrading the skills of staff and arrangement in respect of part-time teaching (NCTE, 2001). Nyarko (2011) stated that the limited collaboration between polytechnics and industry in Ghana cannot be over-emphasized. Since industry is regarded as a major stakeholder in tertiary education around the globe, its views need to be taken into account in the design and review of the curricular. This would ensure that the programmes run by the institutions are more relevant to the needs of industry and society as a whole.

After their upgrading to tertiary status, polytechnics concentrated on HND programmes. Although practical training constitutes an important component of the formation of the polytechnic student, no formal agreement exists between the polytechnics and industry to promote the industrial component of the training including industrial attachment of students (NCTE, 2001).

Currently about 60% of all polytechnic students are enrolled in business-related disciplines with only a small percentage in science

and technology programmes. The teaching and assessment of hands-on practical skills are not adequately catered for in the polytechnic curriculum. Industrial attachment programmes for students are unstructured, ill supervised and are not considered a major assessable component of the accredited courses (Afeti and Mireku-Gyimah, 2003).

Polytechnics were elevated to tertiary status without adequate upgrading of their facilities, infrastructure and equipment. Indeed, NCTE (2002) stated that polytechnics inherited the physical and academic facilities of the Technical Institutes which were converted to polytechnics. Akyeampong *et al.* (1998) stated that the problems of infrastructure related to the lack of laboratories, libraries, workshops, classrooms, lecture theatres and staff offices. Facilities and tools for practical training were also obsolete, and there was a dearth of essential workshop and laboratory equipment as well as consumables for training (Afeti and Mireku-Gyimah, 2003). Kwame *et al.* (2001) indicated that since their upgrading in 1993, there had not been a commensurate expansion of facilities in most of the polytechnics to meet their roles. The inadequacy of academic facilities, no doubt, affected mission fulfillment in polytechnics. NCTE (1998) noted that since polytechnics were handicapped by not having laboratories or workshops, the students had to be sent to the then University of Science and Technology (UST) for their practicals at great cost to the polytechnics.

For instance, Ho Polytechnic sent students for two weeks each academic year for practicals at a cost of 6.8 million cedis. Students from Sunyani Polytechnic were sent to KNUST four to five times a year for three to five days of practicals each time at a cost of 5 million cedis. Similarly, Kumasi Polytechnic undertook practical training of its students at KNUST at the cost of 12 million cedis in 1996/97 academic year alone.

Actions of Stakeholders to Counter the Challenges Faced by Polytechnics

In the mid-90s to the 2000s, the Government of Ghana, the National Council for Tertiary Education, the leadership of polytechnic institutions and the staff and students of polytechnics initiated activities and projects to counter the challenges in polytechnic education.

The role of students in shaping the development of polytechnics/

technical universities relates to protests and agitations. Indeed, in 1997, more than 10,000 polytechnic students boycotted lectures for nearly two months demanding that the Higher National Diploma be equated to university first degree. Again, in 2002, the students embarked on a series of street demonstrations and a 10-week boycott of lectures to demand the creation of opportunities for them for further education or what they described as academic progression at the university level (Afeti, 2002). In 2004, students and staff of polytechnics embarked on various nation-wide strike actions and demonstrations to call for better job placement in the public service and improvement in conditions of service.

In 2004, grievances such as improvement in the conditions of service and mandate for negotiating new conditions of service led to agitations by staff. Apart from the agitations in 2004, teachers and administrative support staff of polytechnics intermittently embarked upon strike actions to agitate for improve conditions of service, often making the universities their point of reference (Newman 2013). In fact, some staff left to enjoy better conditions of service in other institutions. Achio (2012) stated that majority of staff sponsored to undertake further studies moved to other public universities to enjoy better conditions of service after completion of their programmes.

Various actions embarked upon by the Government of Ghana, particularly within the tertiary education landscape, provided the impetus in stemming the tide of agitations in the polytechnics. The Tertiary Education Project was instituted by the Government to support the tertiary institutions with equipment and various infrastructure development projects. In year 2000, the Ghana Education Trust Fund was established after agitations by students of tertiary institutions and the fund has contributed massively to infrastructure and staff development in tertiary education institutions including polytechnics. The Teaching and Learning Innovation Fund project was also initiated as competitive fund for tertiary education institutions to engender innovation in tertiary education institutions in the mid-2000s.

These innovations included curricula review, introduction of new programmes and establishment of laboratories and workshops. The Development of Skills for Industry project implemented by COTVET also helped in the development of infrastructure and the supply of equipment for selected polytechnics.

The introduction of the single spine salary structure has helped to bridge the gap in the salaries of staff of polytechnics and universities. Presently, the differences in the salaries of staff of universities and polytechnics are not substantial and this has led to the cessation in the almost annual ritual of staff of polytechnics embarking on industrial action to back their demand for improvement in their emoluments.

The leadership of polytechnics responded to the issues in polytechnic education by sponsoring changes in the legislation that governed polytechnic education and developed a new harmonized scheme of service that changed the designations of staff recommended by the National Council for Tertiary Education. In fact, the Polytechnic Act (2016) Act 745, which replaced the PNDC Law 321, had explicit provisions on autonomy of polytechnic institutions that covered the powers of polytechnics to award degrees.

Regarding staff designations, the Chief Lecturer of a polytechnic was re-designated as a Professor whilst a Principal Lecturer was also re-designated as an Associated Professor. There were the introduction of degree programmes and massive recruitment of students for business and accounting programmes. Indeed, whereas NCTE norms recommended a ratio of 60:40 for enrolment in science/engineering and humanities/business programmes, the actual enrolment in science/engineering and humanities/business programmes in Polytechnics was approximately 35:65.

Establishment of Technical Universities — Mandate, Principles and Powers

Girdwood (1999) stated that in many countries, polytechnics have lost their unique identity and become universities, offering their own degrees and research within their institutions. She advised that Ghana should avoid the temptation to follow this course, recognising that polytechnic leadership, staff and students may be strong advocates for such upgrading. In spite of this caution, the Technical Universities Act 2016 was passed by parliament to convert an initial six polytechnics into technical universities.

The main aim of Technical University is to provide higher education in engineering, science and technology-based disciplines, technical and vocational education and training, applied arts and related

disciplines in consultation with the National Council for Tertiary Education. Additionally, technical universities are expected to apply competency-based and practice-oriented approach in teaching, organisation and delivery of courses and develop strong linkages with industry and professional bodies (Government of Ghana, 2016).

In this regard, Technical Universities Act 2016 prescribed the disciplines for which technical universities could provide education and training. Technical universities have also been placed under rigorous regulatory oversight to prevent mission-drift. The Act proscribes technical universities from offering any programme apart from the aforementioned ones. Technical Universities are expected to consult the National Council for Tertiary Education in the mounting of degree programmes. Indeed, section 19(b) of Technical Universities Act 2016 provides that the Academic Boards of the Technical Universities are to devise and regulate courses of instruction and programmes of study, subject to the approval by the National Council for Tertiary Education and the National Accreditation Board. Higher National Diploma programmes of Technical Universities must be examined and certified by the National Board for Professional and Technician Examinations, approved by the National Council for Tertiary Education and accredited by the National Accreditation Board.

Discussion and Conclusion

The initial thrust for the establishment of polytechnic institutions was informed by the need to provide advanced technical education to foster national development and provide opportunities for graduates of junior technical schools to access advanced technical education. However, apart from the socio-economic rationale to provide advanced technical education to provide access to tertiary education and build human capital for national development, unrestrained comparison of polytechnic institutions with universities by internal stakeholders (teachers and administrators) had caused a drift of polytechnic institutions towards business, accounting and secretaryship programmes. This drift in programme offerings nearly caused polytechnics to jettison their mission of providing advanced technical and vocational education.

The changes that occurred in polytechnic education in the 1990s and the 2000s were mainly engendered by internal constituents with

the objective of securing the same recognition as public universities and the benefits thereof. The actors employed agitations, strikes, threats of strikes, demonstrations and facilitation of changes in enabling legislation of polytechnics and governance instruments to press demands for change. On the other hand, the drift in mission resulted from their attempt to maximise income through the recruitment of students for business programmes. Other factors that were germane to the desires of the internal constituents were weak regulatory oversight and a fortuitous national political environment.

In fact, weak regulatory oversight by the NCTE contributed immensely to mission drift in polytechnic education. The Council in the face of incessant mounting of business and secretariat programmes by the various polytechnics failed to call the institutions to order through drawing their attention to the application of the appropriate policy guidelines and regulations. The Council failed to apply its discretionary power in fund allocation in tertiary education to call the institutions to order through threat of withdrawal of funding or actually defunding the unrequired programmes. The Council also failed to direct the institutions as to the priority areas in tertiary education, thus, allowing the institutions to have a field day regarding the mounting of business/secretarial programmes. Even though the Council later introduced guidelines for mounting new programmes, it was too late to stem the tide in the mounting of non-vocational and technology-based programmes.

Unclear policy environment contributed to mission drift in polytechnic/technical universities. Effah (2004) stated that when the polytechnic institutions were elevated to tertiary status there was no clear management model for the institutions to adopt. Thus, in the face of uncertainty the institutions decided to adopt the practices of the dominant unit in the environment — universities. The NCTE, the regulatory body did not have clear policies to ensure that polytechnics operated as vocational and technical education institutions. Additionally, the fund allocation mechanism in tertiary education was not designed to incentivise the institutions for executing their mission. In this regard, the Council provided public funding to tertiary education regardless of the attempt by the polytechnics to dissimulate their mission; and this state of affairs led to attempts to change the mission of polytechnic and technical universities.

Before the elevation of polytechnics to technical universities no

study was conducted on the socio-economic contributions expected of Technical Universities. Even though the Afeti Committee provided the technical basis for the elevation of polytechnics to technical universities, no input and output analysis, capacity building requirements, priority programme areas and niche areas of technical universities were assessed.

The Technical Universities Act 2007 clearly defines the focal programme areas of technical universities to prevent mission drift. Indeed, the technical universities are expected to provide higher education in engineering, science and technology-based disciplines as well as technical, vocational and training and applied arts and science programmes. Additionally, technical universities are mandated to provide opportunities for technical and professional skills development and applied science. However, legislative provisions are not enough to guarantee that the institutions would stick to their core mandate. Policies and effective mechanisms should be developed by regulatory bodies to bolster the institutions to execute their mandate.

The National Council for Tertiary Education need to develop mechanisms to fund Technical Universities on the basis of cost per student to foster the funding of students and programmes considered as national priority. In this regard, the NCTE should come up with national priority areas for which the institutions would be supported to develop new programmes. Thus, public funding would only be provided for programme areas that are vocational, technical and technological in nature.

Again, the National Council for Tertiary Education should come up with priority disciplinary areas for technical universities. Public funding should be applied to support the mandated and prioritized programme areas. Funding should be on the basis of unit cost to ensure that students pursuing programme areas that are not within the mandated and priority areas are not funded.

The conversion of polytechnics to technical universities should be complemented with clear policies and regulations to prevent the institutions from deviating from their original mandate of delivering advanced technical education and training.

National Council for Tertiary Education should continue and even strengthen its initial approval of programmes to ensure that new programmes are in the priority areas identified by the Council.

Additionally, the Council should engage stakeholders on the mandate and mission of the Technical Universities and based on these engagements, develop national policy on priority and niche areas for Technical Universities to prevent isomorphism and mission drift.

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Trends in Higher Education: The Administrator's Dilemma

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Abstract

Effective higher education management and administration is key to the development of tertiary education. There are however, various challenges which have necessitated the call for the university administrator to think outside the box. The challenges confronting higher education management in general and in particular, Ghana, call for new ways of managing the system. University administrators tend to be more of managers, thus sticking to the status quo of practices, norms and statutory requirements. What we currently need are leaders who will bring change and robustness into the administrative machinery of higher education institutions. Current trends demand that proactive rather than reactive measures are taken by university administrators to keep the university system effective and fit-for-purpose. There is sufficient literature on higher education management as well as global trends and challenges confronting higher education. This paper thus looks at some of the key challenges and proposes ways and means to address such, drawing from some experiences at the Kwame Nkrumah University of Science and Technology.

The article thus, is intended to examine some shifts and challenges in higher education management and what strategies can be adopted by the university administrator to ensure an efficient and effective management system. The authors share many years' experience as university administrators at the Kwame Nkrumah University of Science and Technology (KNUST), Kumasi in Ghana. These experiences were based on the various schedules of duties, participation in workshops, conferences and interactions with colleagues. Being a case study, the paper draws from current research highlighted in the literature and proposes strategies that can be adapted to cope with some of the challenges in higher education management. This review and shared experiences of the authors are most likely to benefit higher education institution administrators in Ghana and beyond.

Introduction

The global terrain of Higher Education (HE) management is becoming more and more challenging. Yes, new times call for new approaches, else one becomes irrelevant and systems dysfunctional. A number of global issues have come up lately that pose a challenge to HE management and in particular, university administration. These include

higher education funding, government and market pressures, conduct of research and its utilisation, calls for community service, massification, institutional decisions relating to staff, student recruitment and programmes, competition between privately owned tertiary institutions and publicly owned ones (government funded) (Eisemon & Davis, 1991; Grit, 1997; Martin and Etzkowitz, 2000; Etzkowitz *et al.*, 2000; Etzkowitz, 2004; Castells, 2009; Salamzadeh, Salamzadeh & Daraei, 2011; Cloete *et al.*, 2011, Grobbelaar & Kirkland, 2013, Cloete *et al.*, 2015, UNESCO, 2018).

This ever-changing terrain demands that management and for that matter administrators adopt and adapt coping strategies in order to keep the HE machinery running. This article examines the major shifts in higher education management and what strategies can be adopted by the university administrator to ensure an efficient and effective management system. The authors share a lot of experience as university administrators at the Kwame Nkrumah University of Science and Technology, Kumasi in Ghana.

Methodology

This paper is essentially a case study with an analysis of some global trends in higher education as discussed by various authors in the literature. The current authors share experiences of many years in higher education management. Most of these experiences and issues discussed in this paper are from interactions with colleagues, issues raised at workshops and conferences, both local and international, and, discussions from official meetings. Considering the fact that these are current and prevailing issues the authors propose possible solutions from international and local best practices. Practices at KNUST which have been found to be workable solutions to some of the challenges raised have also been discussed. The paper, therefore, initiates the process for further discussions at various levels of higher education management.

Discussion

Key issues in higher education management

The sub-sections that follow highlight some of the key issues in higher education that call for proactive action by university administrators.

Funding higher education

Funding is needed not only for teaching and research purposes but also to support the administrative set up of an institution. Funding for higher education has been the bane of many institutions in Africa. Government financial support for HE has been dwindling over the years. It is a fact that government funding alone is not sufficient for meaningful research. Universities therefore tend to enter into collaborations, partnerships and other sources that bring in some funding for research (Cloete *et al.*, 2011). The KNUST is no exception to this and has therefore adopted some of these measures. The main financier of public research undertaken by universities and other research institutes is government through the various ministries (Cloete *et al.*, 2011). The Council for Scientific and Industrial Research (CSIR), a research institute in Ghana, together with all its subsidiary research centres obtain government subvention through the Ministry of Environment, Science and Technology. The activities of the Centre for Scientific Research into Plant Medicine are supported through the Ministry of Health whereas the public universities, including KNUST, obtain funding through the Ghana Education Service (GES) and the Ghana Education Trust Fund (GETFund) facilitated by the National Council for Tertiary Education (NCTE).

Subventions from governments for the public universities are mainly for emoluments, administration and service, staff development and training with little left for research. KNUST, like other public universities in Ghana, therefore has to depend heavily on internally generated funds (IGFs) and strategic partnerships to obtain the needed funding for research and development. To augment funding by the state, KNUST has drawn from many collaborative efforts and research support from corporate organisations and foreign donors over the past decades. The university's internally generated funds (IGFs) comes from school fees, income from semi-commercialised units, such as the University Printing Press, university hospital, photocopy unit, guesthouses and shuttle services. These are captured under private funding in the figure below. The 2017 budget of the university (KNUST) gives the breakdown of the university's sources of income in terms percentages as follows:

- Public funding from government subvention = 55.56%

- Private funding = 37.85%
- Investments = 6.59% (KNUST budget, 2017)

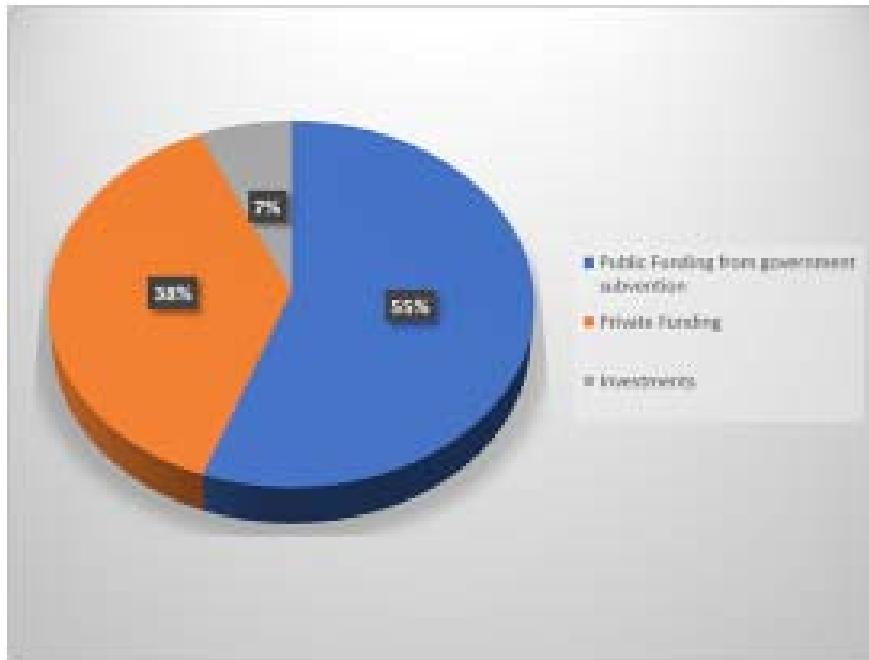


Figure 1: Funding sources for KNUST

Source: KNUST budget (2017)

The university administrator must rise to the task of strengthening the other areas of income generation. Production units such as photocopy units and printing presses have yielded some dividends to supplement the budgets of the university. Figure 1 above gives an indication of the potential for more funding through private funding and investments. The university administrator must thus evaluate these sources and assess the training needs necessary to build capacity for resource mobilisation.

Research and its impact

Among the key essential activities of the University that calls for a strong administrative support and the prioritisation of needs is research and its relevance to society. The current thrust is towards knowledge transfer and applied research (Beer, 2008). Estabrooks and Derksen (2008) argue that society has become aware of the need to depend on

research findings and the way it can be used to improve the standard of living. One of the key sources of research findings can be found within the universities and other research institutes. Within the university system, the two main actors in the process of knowledge production are researchers or academics and post-graduate students.

It is the opinion of the authors that, as it is generally assumed, research must be aimed at advancing knowledge, influencing policy, practice and to a large extent aimed at solving socio-economic problems. The increasing demand for research findings is because of the expectation that knowledge production arising out of research is to address practical human challenges, guide decision makers in their decisions and practices (Estabrooks & Derksen, 2008). Also, this demand for the impact of research findings has resulted in many governments making direct demands on universities and research institutions to provide holistic solutions to societal problems. Presently, the most challenging problems include food security, housing, provision of portable drinking water and the provision of good sanitation. In view of this, policy regimes and measures are being put in place by governments to maximise the social impact of research. Some of these measures demand efficiencies in higher education (HE) systems (Wood, 2013). Wood argues further that, irrespective of the notion that universities are 'ivory towers', the boundaries around university campuses are gradually coming down as they engage more closely with local civil society to address practical issues of concern.

Currently, KNUST has several completed and ongoing collaborative research activities and projects which have impacted society positively. The setting up of an Office of Grants and Research (OGR) to drive research investments as well as promote its utilisation in the university may have contributed to the success story. The role of the administrator in the effective operation of the OGR is paramount. Information available at the OGR confirms the existence of many collaborative efforts, projects and their funding sources (KNUST Research Report, 2016).

The call by the public and tax payers for accountability and relevance means that measures are taken by universities to ensure that research is not only produced but utilised to meet the needs of society. This calls for the identification of the appropriate channels for the engagement of relevant stakeholders for the purpose of disseminating

research findings and more importantly their applications to addressing societal needs. The place of the Administrator in this process of stakeholder engagement by different departments and faculties to link researchers and users of research is very crucial.

Increased students' intake

One of the methods being adopted by universities to obtain needed funding for the running of the administrative and academic machinery is to increase the intake of students. This has implications for quality delivery of teaching and learning. Undertaking scientific activities becomes a problem where there are large numbers and inadequate appropriate resources. It is therefore necessary to adopt coping strategies such that with increased students' intake, there will be corresponding expansion in facilities. As far back as 1991, Eisemon and Davis argued that the rapid growth in enrolment which is unequally matched by available resources has led to institutions adopting innovative ways of reconciling the "pressures for mass higher education with selective development of high-quality scientific training and research". Apart from efforts by universities and governments to cope with student numbers and its attendant effects on research and innovation the private sector and philanthropic associations can be called upon to assist. According to Eisemon and Davis (1991), the lack of local government bodies and voluntary associations, local philanthropic foundations and private business with enough financial resources to support universities, have compelled governments to take up almost all the burden of financing higher education. The argument continues that economic conditions and competing and pressing demands from other sectors of the economy have forced successive governments to limit expenditure on higher education, and to shift a higher fraction of the direct costs on to the students. Thus, universities have had to resort to increases in students' intake to generate additional funds for their operations. This results in an imbalance and therefore teaching occupies more time than the other activities, including research. As asserted by Martin and Etkowitz (2000), increased students intake creates a weakening of the relationship between research and teaching thus posing a threat to the very existence and relevance of the university.

Currently, available facilities at KNUST under normal circumstances would have been highly inadequate for teaching and

learning due to the high student numbers, but for some proactive mitigating measures taken by the university. What KNUST has done over the years is to split classes into smaller sizes and also establish satellite campuses through the distant learning approach. They have also employed the use of multimedia resources, for example, the use of electronic smart podiums which enable lecturers to teach large classes divided into different lecture rooms at the same time. Due to limited laboratory space, sessions are organised at different times for large classes divided into smaller groups.

The entrepreneurial university and research commercialisation

It used to be the case that in the past, universities, at least using KNUST as an example, were not so much into the business of commercialisation but with current trends this is changing. A lot of innovative ways are coming up, including the setting up of production units to raise funds for the university. Grit (1997) asserts that in some places in the world “universities have lost the misgivings about commercial orientation; they have learnt that knowledge is a product or intellectual property which you can take advantage of in the market”. This assertion may have informed the idea behind the entrepreneurial university. Salamzadeh, Salamzadeh and Daraei (2011) defined the entrepreneurial university as a system involving inputs, process and outputs with the aim of mobilising abilities, capabilities and resources to make economic gains. The inputs needed are resources, culture, rules and regulations, structure, mission, entrepreneurial capabilities, and expectations of society, industry, government and market. The processes for achieving this end are; commercialisation, innovation, logistical processes, managerial processes, multilateral interaction, innovation, networking, selection, research funding and financial processes, research and development activities. The expected outputs are; entrepreneurial human resources, entrepreneurial networks, entrepreneurial centres and effective researches in line with market needs, innovations and inventions.

As part of the traditional role of teaching and research, the economic and social development of higher education has since the second half of the 20th century been added as the third mission of the University (Etzkowitz, 2004). There is a process through which the entrepreneurial university has to go in order to fully pursue the third mission. Etzkowitz

et al. (2000) explain that due to increased importance of knowledge, the entrepreneurial university has emerged as a response in enhancing national and regional innovation systems. Also, as a result of the entrepreneurial university, the university can be recognised as a creative and cost-effective inventor that serves as knowledge and technology transfer agents. “An entrepreneurial university proved to be an organization where risk taking is a normal phenomenon when new practices are initiated, and where entrepreneurship is often perceived as taking innovation practices to a commercial profit-exploiting stage” Gjerding *et al.* (2006).

In order to create an entrepreneurial culture, the university must embrace entrepreneurship as part of its working practices. An entrepreneurship culture is most likely to lead to research commercialisation. Efforts should be made by governments to focus on the university as a source that enhances the climate suitable for innovation as well as the creation of scientifically based economic development. To be enablers in economic development, universities must endeavour to achieve their missions by extending their research and teaching to the larger community.

In the light of the above the university administrator must be business-oriented, facilitating the creation of business incubators, liaison offices, technology transfer offices, in order for research results to be transferred through the various organisational structures to the stage of commercialisation. To a greater or lesser degree, the introduction of entrepreneurship training into the university system has affected the educational and research agenda of higher education institutions. (Etzkowitz *et al.*, 2000).

The university-industry-government relationship

Activities leading to the transfer of knowledge have brought a lot of transformation in the relationship between the university, industry and government. This relationship has become a strategic issue: as a form of partnership for university research and as a policy tool for economic development (Guena and Muscio, 2009). Knowledge transfer is enhanced through the university–industry–government relationships, otherwise known as the triple helix. It is reported among university scientists that interacting with industry brings about better basic research and gives opportunity for different perspectives which can sometimes be an inspiration for innovative research (Siegel *et al.*, 2003).

The core element in the university-industry-government relationships are transactions that occur through the mechanisms of sponsored research support (including participation and sponsorship of research centres), patents and publications, agreements to license university intellectual property, industry funded laboratories, formal and informal contacts such as meetings and conferences, the hiring of research students, and new startup firms (Bercovitz and Feldmann, 2006; Guena and Muscio, 2009). According to the triple-helix model, the relationship between universities, industry and government become increasingly intertwined, creating activities of collaboration where the different rationalities of university, industry and government are bridged and merged (Gjerding *et al.* 2004).

The capacity of university administrators to manage the intensified rise in the global knowledge economy needs a critical examination. Competencies in seeking strategic partnerships that go beyond the traditional roles of administrators are needed. World-class research universities, with proactive administrators, are at the forefront of pioneering partnerships that seek to enhance the university-industry-government relationship. The challenge of how to bridge the university-industry-government divide can be addressed by highlighting what makes universities attractive as industry partners, what structures make for excellent partnerships and what approach produces seamless interactions. Over the years the University Relations Office and the Office of Grants and Research of KNUST have made some efforts at showcasing some research findings with the aim of bringing research into the public domain. By so doing industrial partners, government agencies and other stakeholders become aware of what the university is capable of doing.

The challenge of university rankings

Education has long ceased to be defined by local and national issues. In fact, the frontiers of education are said to be endless. It has gone global, with rankings of universities across international boundaries becoming a regular annual feature. Clientele (students and their sponsors) now have more informed basis for selection of institutions of higher learning and this places an enormous responsibility on management to ensure that the institution is well-branded and internationally recognised. Staff training and capacity building in appropriate fields to boost the

credentials of the university, increase its visibility and ranking depends to a large extent on smart management practices. The Administrator, working closely with other key academic staff, will need to study the ranking criteria and requirements in order to appropriately inform the university management in setting its own goals and mapping out a plan to accomplish same in this highly competitive process. As to whether or not the ranking is fair or not, it has received wide acceptance among stakeholders and therefore serves as a useful yardstick to measure the performance of universities. Both students and staff depend on these rankings to inform their choices. Perhaps it is about time African universities determine their own ranking system that takes cognizance of its own circumstances and aspirations.

Attracting the right caliber of staff

With the quest for a strong competitive edge at the global level comes the issue of attracting the right caliber of staff. In the UK, the higher education sector “generally experiences little difficulty in recruiting and retaining staff except in some professional areas of academic recruitment, where private sector salaries and external earnings potential are very high, and the labour market has historically been buoyant (e.g. the law, accountancy and some other specialist business fields)” (Beer, 2008). This achievement notwithstanding, it is also possible that they may be experiencing similar challenges in recent times.

Ghana, like many other African countries has experienced a continuous exodus of high calibre and experienced researchers to more developed countries for obvious reasons; financial gain and perhaps for prestigious reasons. Apart from attracting the right caliber of staff especially for teaching and research, universities are confronted with the challenge of retaining them. Professionals these days take on jobs as stepping stones for greener pastures. Some jobs are taken just to enrich one’s curriculum vitae. Qualified staff are sought for to raise the profile of the institution. There are examples of university administrators and academics who within a period of five years have worked with three different higher education institutions. Again, institutions seeking affiliation and accreditation would provide a long list of experienced staff just to satisfy a criterion.

International migration policies are making it easier for experts to move from one country to another. It is therefore not surprising that

Ghana has for years been hit hard by the brain-drain phenomenon, with our most resourceful and productive workforce based in the Diaspora. The managers of the university need to devise some strategic approaches to retain their staff. Adopting an open-door policy, creating avenues to address staff grievances and other motivation packages can go a long way to encourage staff to keep their jobs for a little while.

Attracting qualified applicants

University Administrators are confronted not only with the challenge of attracting students with the right background but also obtaining the critical mass of students for running some academic programmes. The middle class will opt for private and so-called elite institutions whilst majority of Ghanaians will opt for the traditional publicly funded universities that are usually viewed as prestigious. Whereas some programmes in some institutions are oversubscribed, others are looked down upon and taken as fourth choices. The university is therefore faced with the problem of handling large number of students for some programmes while others lack students. Also, high performing candidates will subscribe to the so-called high profile programmes while the less performing settle for less competitive programmes.

This challenge is worsened by the relatively more attractive programmes being offered by sister institutions and sometimes private universities.

Management should seek to roll out high demand academic programmes and find ways of expanding enrolment within the limited resources. There will be the need to aggressively campaign for programmes that are hitherto looked down upon but which have good potential for national development and the job market. It should be possible to repackage such programmes to make them more attractive to applicants.

The KNUST has a rich history of developing strategies to recruit international students to mainly pursue programmes of their choice. This is evidenced in the number of international students in the university. We must concede though, that the high numbers of international students seeking admission to KNUST has reduced. This calls for the introduction of more demand driven, labour market relevant courses/programmes attractive to both local and international students. The disharmony between academic training and job market/job placement must also be

given a serious attention by the university management in order to attract more students.

Graduate unemployment

Graduate unemployment is a matter of great concern to every educator. So much public and private funds are spent on graduates who end up not getting jobs long after their National Service. This may be partly due to lack of job spaces to accommodate them but also due to lack of requisite skills required by the labour market. It is often suggested that curricula, teaching and learning should be more applied and practice-oriented in order to gain the confidence of employers and various industry actors. Whereas the first argument calls for knowledge which is immediately useful for work, the second describes a more complex relationship between learning and the field of work. The expectation is that higher education will ensure a systematic confrontation between ways of thinking and problem solving within academic theories on the one hand and the modes of professional thinking and problem solving on the other (Kluge, Neusel & Teichler, 1981). In addition to such a general approach in teaching and learning, internships and other practical phases in the course of study, as well as the involvement of practitioners in teaching and various other specific activities and measures are expected to serve to aid students to be more attractive to the job market and thus limit graduate unemployment. The role of the university administrator comes in handy in the preparation of graduates for the world of work.

Quality assurance

The issue of quality of education is of great concern to all university administrators. There is growing consensus that a need exists for improved standards and greater transparency in the process for determining the credit worthiness of learning attained in our institutions of higher learning. To ensure improved standards there must be standards and measurement instruments set within a policy framework. Assessment instruments backed by appropriate legislation to ensure compliance are therefore needed to ensure quality delivery of HE. There is however, the difficulty with the uniformity of assessment that spells out the yardstick for assessors. It is therefore, imperative to work towards an empirical, calibrated widely-accepted performance benchmark which

will afford different assessors the use of the same yardstick. This is the duty of administrators and other managers of HE.

Conclusion

The above discourse highlights some prevailing challenges in HE that need the attention of the university administrator. The call for relevance and accountability of the higher education system falls on the lap of those who directly manage the system. In order to remain relevant and to meet the expectation of the tax payer the university administrator would have to look for ways and means to upgrade his or her knowledge in the field of higher education management. There are other institutions of high learning within and outside this country that have practices which have helped to mitigate some of the outlined challenges. Learning from these experiences is worth considering. It is about time managers of higher education systems consider mounting tailor-made academic programmes that will bring managers of HE institutions up to speed with contemporary issues. The future of HE management highly depends on how versatile the managers will be and how effectively they can turn situations around for good. Whether we like it or not change is inevitable. Again, the university administrator owes it a duty to prove to funders of HE that they are capable of managing the system.

The clarion call is, prove to us that you can manage the higher education machinery in the face of daunting challenges and we will continue to fund it.

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Stakeholders' Perception of Quality in Distance Education and its Implications for Educational Administration in Ghana

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Abstract

The purpose of this study was to examine stakeholders' perception of quality in a distance education programme of a Ghanaian university. The study adopted a case study research design to collect data from 320 students, 56 facilitators and 24 administrative Staff selected randomly from one centre of a Ghanaian university involved in Distance education. The data were collected through the administration of questionnaires. Factor Loadings for the Items of Distance Education Quality was performed. The factor analysis was performed using the Principal Component Analysis extraction method with varimax rotation. The findings indicated that students' level of awareness of quality assurance practices at the Institute of Distance Learning (IDL) in the Ghanaian university was very low as compared to facilitators and administrators. Regarding stakeholder perceptions of quality of distance education, students rated Support Services high whilst Academic Integrity and Institutional Prestige had a lower scoring. Facilitators' also rated Support Services higher and rated Infrastructure and Learning Environment lower. Administrators, on the other hand, gave Support Services the highest rating whilst Infrastructure and Learning Environment was rated the lowest. Further analyses revealed that there are significant differences between the mean ratings of Indicators by different stakeholders. The study recommends that educational administrators must have systems in place to ensure adherence to quality standards, build the capacity of staff in modern trends in distance education, and periodically plan and evaluate quality assurance practices among stakeholders.

Introduction

The quest for higher education continues to increase with economic and industrial development which inevitably leads to mounting demands on higher education and this would require skills normally attained through higher levels of education (Trow, 2005). Acquiring higher education is, therefore, both good for the economic health of nations and for the economic competitiveness of society (Delbanco, 2012). Higher education has over the years, been delivered through the primary

mode of the traditional lecturer-student interaction in a formal classroom setting, often referred to as “sage on the stage” (O’Malley and McCraw, 1999 as cited by Shachar and Neumann, 2003). The learning environment for higher education has largely been a “face-to-face” interaction between students and teachers at a physical site. However, higher education in the 21st Century is adjusting gradually to new modes of delivery that capitalize on technological advancements to achieve expected goals in a more convenient and flexible manner. These trends in higher education have consequences for stakeholders who are connected to higher education. In view of these developments, higher education institutions have sought to reconstruct curriculum, pedagogy, assessment policies and delivery methods directed at improving efficiency while making education accessible (Westerheijden, Stensaker, & Rosa, 2007). The major issue is that the traditional mode of delivery has not only been inadequate to match the changing trends on the higher education landscape, but has also proved unsuccessful in providing adequate access to higher education seekers in some instances. The ever-increasing social demand for higher education has challenged the limited facilities (Howell, Williams & Lindsay, 2003), bringing to the fore, the concept of distance education which offers greater access to higher education in a more convenient and flexible manner. The perception of stakeholders is critical for educational administrators who must plan and put systems in place to ensure quality in education and customer satisfaction.

The distance education concept, which is not a recent phenomenon (Kretovics, 2003) has been embraced by stakeholders as a viable complement (Twigg and Valentine, 2002). Distance education has, over the last decades, assumed greater importance in tertiary education in Ghana. Currently, Ghana has the following major public universities, namely, the University of Cape Coast (UCC); the University of Education, Winneba (UEW); the University of Ghana (UG); and the Kwame Nkrumah University of Science and Technology, Kumasi (KNUST) running distance education at both undergraduate and graduate levels (Ohene & Essuman, 2014). Although Ghana continues to make modest strides in the provision of distance education, there appears to be very little research on quality issues for distance education in Ghana, due to the fact that most of the distance education programmes are

relatively new (Ohene & Essuman, 2014); and the concept generally is also new in the Ghanaian context.

As distance education becomes a viable option, quality assurance issues have become critical for institutions and stakeholders (Ogunleye, 2008). Even though a number of researches have been conducted on several aspects of distance learning at the Kwame Nkrumah University of Science and Technology in Ghana, there is no research that addresses how the diverse users of the distance learning perceive quality and its implication for educational administration. Lerra (2014) asserts that out of the various problems of today's distance education, the most critical one is how it is perceived by the individuals involved in it. According to Birnbaum (2001) and Srikanthan and Dalrymple (2003) there is little evidence that the views and perspectives of stakeholders have been given any significant consideration in the planning and implementation of higher education in the distance mode. It becomes prudent, therefore, to seek user perceptions and opinions in quality matters as universities in Ghana in particular and other institutions around the world continue to implement quality policies. This will serve as a feedback mechanism for educational administrators for quality improvement, thus, assuring the various stakeholders of the effectiveness of the quality practices that would meet their expectations.

The main objective of this study is to examine stakeholders' perception and expectations of quality of distance education programme in a Ghanaian context. The specific objectives of the study are to ascertain user awareness of existing guidelines and practices for quality at the distance learning programme and determine how stakeholders perceive the quality of distance education in a Ghanaian university.

Methodology

Research Approach

A quantitative, non-experimental research approach with a case study research design was employed. The use of the case study design was necessitated by the need to undertake a detailed empirical examination of how the different stakeholders perceive the quality of distance education at a particular university.

Population

The target population of the study includes all students, facilitators/instructors and administrators of a distance education programme in a Ghanaian University. Based on the target population of the study, a sample size of 400 individuals consisting of 320 students, 24 administrative staff and 56 facilitator/instructors were considered.

Sampling Method and Data Collection

The stratified random sampling method was used to select the various participants. Both primary and secondary data were collected for the study. The primary data were obtained through a field survey after administration of a questionnaire developed from Conceptual Model for Stakeholder's Quality Dimensions in Distance Education (Mbweza, 2014). This was used in examining perception of quality among stakeholders. The primary data included socio-economic data of respondents, data on respondents' perception concerning support services, institutional credibility, academic integrity, infrastructure, cost effectiveness, reward and motivation, and other information relating to stakeholders' perception of quality of distance education at the Institute. Secondary data were collected from review of key documents like distance learning policies and student handbooks. Questionnaires were reviewed by experts to ensure validity. For the Likert Scale constructs, data from the pre-testing exercise were used to test the reliability and internal consistency of the items used by calculating the Cronbach's Alpha coefficients using the Statistical Package for Social Science software (SPSS version 20).

Statistical Analyses

Data collected for the study were analyzed using the Statistical Package for Social Science software (IBM version 20) and Microsoft Excel (2010 version). In the first place, data on multi-item constructs (Likert Scale) were tested for the level of internal consistency, reliability and validity by computing and comparing their Cronbach's alpha values to acceptable test scores. Factor Loadings for the Items of Distance Education Quality was performed. The factor analysis was performed

using the Principal Component Analysis extraction method with varimax rotation.

Results and Discussion

User Awareness of Existing Quality Guidelines and Practices

The majority of the facilitators (75%) and the administrative staff (80%) affirmed that they were aware of the mission and vision statement of the Institute responsible for the distance learning programme of the university. More than half (51.7%) of the students indicated that they were not aware of the mission and vision statement of the Institute. This result implied that a significant number of the students were unaware of the mission and vision statements. Majority (58.6%) of students became aware of the vision and mission of the Institute through their orientation while the remaining 41.4 percent were informed through personal inquiries. With regard to the facilitators, the highest proportion (42.9%) of them also got informed through their orientation and quite a significant number (38.1%) through personal inquiry. Majority (62.5%) of the administrative staffs got informed about the mission and vision statements of the Institute through available documents and records. The results above seemed to reflect the proximity of the various stakeholders to the Institute. Students, due to their distance away from the Institute, were informed through student orientations whereas the facilitators and administrative staff, due to their proximity to the Institute, had the chance to be informed not only by orientation and personal inquiries but also through review of the Institute's records and documents.

Awareness of Quality Assurance Practices

With regard to respondents' knowledge of the quality assurance practices implemented at the Institute, majority of the facilitators and administrative staff, 78.6% and 70%, respectively, responded in the affirmative whereas only 18.4 percent of the students indicated they were also aware of them. This meant that as high as 81.6% of the students were unaware of the quality assurance practices at the Institute. The implication is that, students would not be able to defend or demand

actions that could guarantee the quality of their learning experience they received from the Institute. In respect of quality assurance activities/practices in place, respondents indicated they were aware of the following: provision of relevant teaching and learning materials; high standards in the conduct of examinations and supervision of theses; marking of assignments and giving feedback to students on time; training of staff, facilitators and supervisors; assessment of facilitators; high standards in student intake through interviews; easy access to facilitators anytime on either phone or the internet; provision of virtual classroom for online learning and provision of professional add-on seminars, among others.

User's Knowledge and Awareness of Existing Quality Assurance Practices

The results on user's knowledge and awareness of existing quality assurance practices at the Institute as obtained from the analysis of empirical results collected are presented in Table 1.

Table 1: User's Knowledge and Awareness of Existing Quality Assurance Practices

<i>Variable</i>	<i>Response category</i>	<i>Students (N=147)</i>		<i>Facilitators (N=28)</i>		<i>Administrators (N=20)</i>	
		<i>Freq.</i>	<i>%</i>	<i>Freq.</i>	<i>%</i>	<i>Freq.</i>	<i>%</i>
Knowledge on							
Mission and vision statement of IDL	Yes	71	48.3	21	75	16	80
	No	76	51.7	7	25	4	20
Source of knowledge on Mission and vision statement of IDL	Orientation	41	58.6	9	42.9	2	12.5
	Personal inquiry	29	41.4	8	38.1	4	25
	Documents/records	0	0	4	19	10	62.5
Knowledge of							
Quality Mechanism and practices	Yes	27	18.4	22	78.6	14	70
	No	120	81.6	6	21.4	6	30

Source: Field Survey Data (2016).

User Perceptions of Quality at the Institute of Distance Learning (IDL)

In order to better examine the perception of users on the quality of distance education at the Institute of Distance Learning, a confirmatory factor analysis was first conducted with the view to establishing the quality dimensions for distance education quality at the IDL. The factor analysis was performed using the Principal Component Analysis extraction method with varimax rotation. As presented in Table 2, the main dimensions and components of distance education that influence stakeholders' perception on quality included: Cost Effectiveness and Access to Services; Support Services; Academic Integrity and Institutional Prestige; and Infrastructure and Learning Environment. The factors or indicators that loaded strongly on each of these components are presented as follows:

Cost Effectiveness and Access to Services

As the results presented in Table 2 show, eight (8) indicators load strongly on the Cost Effectiveness and Access to Services component of distance education quality at the IDL. The internal consistency of the indicators as measured by the Cronbach alpha was 0.908 which indicates an 'excellent' internal consistency and reliability based on the interpretation of George and Mallery (2003). Among the indicators that load strongly on this component of quality, Access to Reliable Internet Facilities had the highest factor loading (0.784), followed by Access to State-of-the-Art Computer Laboratories (0.771) and then Access to State-of-the-Art Computer laboratories (0.767). The indicator with the least factor loading on this component was Flexible Fee Payment Systems (0.559).

Cost effectiveness and Access to Service is an important component or dimension of quality in distance education. The fact that availability of financial support systems for students (0.755), cost of services which reflect the standard of services delivered (0.705) and institutional practices and procedures help to reduce learner costs (0.702) load strongly on this component supports the assertion that Cost Effectiveness is an important dimension of quality at the Institute. According to Shea *et al.* (2001), distance learning providers around the world are beginning to explore cost-effective ways of providing demand-driven and learner-

centered supports to satisfy this high-rated distance education quality dimension. The result of this study, therefore, corroborates the assertion that Cost Effectiveness and Access to Services and Facilities remain a major dimension of quality perceived by stakeholders.

Support Services

The second dimension or component for distance education quality at the IDL as identified from the factor analysis was Support Services. In all, ten (10) indicators loaded strongly on the Support Services dimension, with internal consistency scoring 0.865 (Cronbach alpha). The multi-item construct of the Cronbach alpha value of 0.8 to 0.9 is considered to have very good levels of reliability. The result, therefore, shows that internal consistency and reliability of the items on Support Services was very good. As indicated in the results (Table 2), the three indicators with the highest factor loading on the Support Services component were existence of complaint procedures, complaints are given timely attention; and, registration processes are convenient and flexible, with factor loadings of 0.805, 0.760 and 0.662, respectively. Other factors that loaded strongly on Support Service included timely provision of course modules materials (0.605), effective and timely flow of information to students (0.596), availability of student advisory services (0.586) and effective interaction between students and programme coordinators (0.517).

Many studies on distance learning quality recognise Support Services as key component of quality in distance education. According to Jung (2012), different kinds of Support Services are needed for success in DE, including student support, faculty support and institutional support services. From the findings of this study, it is noted that student complaint processes, timely attention to complaints and other student support services load strongly as factors for distance education quality at the Institute. The findings, therefore, support the position of Engleman (2005), Clark *et al.* (2009) and Jung (2012) that Support Service is part of the principal components of distance education quality.

Academic Integrity and Institutional Prestige

The study also identified Academic Integrity and Institutional Prestige as a principal component and dimension for quality at the IDL. The

factors that loaded strongly on this dimension were five, with a Cronbach alpha of 0.597. By an interpretation by George and Mallery (2003), a Cronbach alpha of 0.5 and above has an acceptable level of internal consistency and reliability. The multi-item construct on Academic Integrity and Institutional Prestige could be said to be reliable. Among the items that loaded strongly on this component (Academic Integrity and Institutional Prestige) were mechanisms for validating and verifying student admission, with a factor loading of 0.826; mechanisms for validating and verifying registration, 0.797 and Institute engages highly qualified staff (0.724). These indicators of Academic Integrity and Institutional Prestige are consistent with Jung's (2012) observations.

In the findings of Jung (2012) whose study was similar to this particular work, the Quality of Staff loaded strongly on the Institutional Credibility dimension of quality in distance learning. In Jung's (2012) study, it was found that Institutional Credibility dimensions were powerful indicators of distance learning quality as perceived by the Asian learners; and, each explained about 85–86% of the domain's variance. Several distance education educators and researchers, including D'Antoni and Mugridge (2004), have noted that there is a constant struggle for parity of esteem in distance education. According to Jung (2012), programme recognition and satisfaction of national and international accreditations, showing strong leadership, and guaranteeing member qualifications promote distance education institutions' public credibility and perceived quality. The result of this study, therefore, is clearly in tandem with the preponderance of views on the Academic Integrity and Institutional Credibility dimension of distance education quality.

Table 2: Factor Loadings for the Items of DE Quality

Preliminary statistics $KMO=0.80$ *Bartlett's test of sphericity [approx chi-square=3592.737, df =1326, p-value=.000]*

**Dimension 1: Cost Effectiveness and Access to Services
(Cronbach Alpha =0.908)**

<i>Indicators</i>	<i>Factor loading</i>
Access to reliable internet facilities	.784
Access to state-of-the-art computer laboratories	.771
Financial support systems are available for students	.755

Costs of Services reflect the standard of services delivered	.705
Institutional practices and procedures help to reduce learner costs	.702
Flexible fee payment systems	.559

Dimension 2: Support Services (Cronbach Alpha = 0.865)

<i>Indicators</i>	<i>Factor loading</i>
Systems for handling complaints	.816
Existence of complaint procedures	.805
Complaints are given timely attention	.760
Registration processes convenient and flexible	.662
Programme coordinators are available and are introduced to students at the beginning of studies	.616
Timely provision of courses/modules materials	.605
There is effective and timely flow of information to students	.596
Student advisory services are available	.586
Effective interaction between students and programme coordinators	.517

Dimension 3: Academic integrity and institutional prestige (Cronbach Alpha =0.597)

<i>Indicators</i>	<i>Factor loading</i>
Mechanisms for validating and verifying student admission	.826
There are mechanisms for validating and verifying registration	.797
The Institute engages highly qualified staff	.724
Course/Learning materials are distributed early	.573
Programmes of study are recognized	.507

Dimension 4: Infrastructure (Cronbach Alpha =0.713)

<i>Indicators</i>	<i>Factor loading</i>
Facilitators/Instructors have access to library resources	.745
Learners have access to library resources	.647
Students have access to utility facilities	.610
The institution has pleasant aesthetic designs (landscape, buildings etc.)	.596

Source: Field Survey (2016).

Infrastructure and Learning Environment

The fourth dimension of distance education quality noted was Infrastructure. Infrastructure, as a component of distance learning quality was loaded strongly by four indicators, namely, Facilitators/Instructors have access to library resources (0.745), access to library resources (0.647), utility facilities (0.610) and pleasant aesthetic designs [landscape, buildings etc.] (0.596). The internal consistency and reliability of the items was good and acceptable with Cronbach alpha value of 0.713. According to Jung (2012), ensuring the reliability and security of technology systems, as well as, the provision of physical spaces, helps to improve stakeholders' perception of distance education quality. The results of this study, as presented in Table 2, validate this position. Jung (2012) classified Institutional Credibility and Infrastructure dimensions of distance learning quality under the Environmental Domain which he noted as a crucial attribute for quality in distance education.

According to Daukilas *et al.* (2008), the underlying structure of any distance course is the technological infrastructure that supports student learning and success. In the case of the IDL where the dual mode of distance education delivery is adopted, both technological infrastructure and physical infrastructure have a great influence on quality perceptions. Al-Salman (2011) has noted that distance education succeeds in an environment supported by technological infrastructure and physical structures that allow for technical skills development and flexible learning. The finding of this study does not contradict the above assertions but rather supports the views of the Infrastructure dimension for distance education quality.

Conclusion and Recommendations

From the findings of the study, it is noted that few students were aware of existing quality assurance practices at the Institute. On the other hand, majority of facilitators and administrators had knowledge of the existence of quality assurance practices. Regarding stakeholder perceptions of what assures of/accounts for quality in distance education, students and facilitators rated Support Services high whilst rating Academic Integrity and Institutional Prestige low.

The following are therefore recommended based on the findings and conclusions.

1. Institutions of higher learning around the world must constantly review and improve delivery of orientation ceremonies for students, facilitators and administrative staff; provide timely support services to students and facilitators. Educational administrators must therefore factor this in their strategic plans. Educational leaders must have systems in place to monitor persons who constantly interface with students in service delivery and implement effective communication strategies on operations of their institute.
2. Appropriate quality assurance policy and mechanisms must be communicated to all staff.
3. Institutions offering distance education programmes must recognise that improvement of the systems has to be managed and adopt modern methods of supervision and training.
4. Administrators must remove all barriers that prevent stakeholders from receiving the best of services from the institution.
5. Lastly as a long-term measure, educational administrators must lead a process that will develop a systematic approach to manage the implementation of Total Quality Management in their institutions.

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Occupational Stress and Job Performance of Administrative Assistants in a University

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Abstract

Work-related stress undoubtedly could negatively affect job performance in any given institution and thereby have serious implications for the overall output of the institution, if not well managed. The study sought to find out the factors that contribute to occupational stress among administrative assistants of a public university in Ghana and the coping strategies adopted by the staff to deal with stress-related problems. Stratified sampling technique was used to select 150 respondents from a total population of 300 for the study. Questionnaires were used to collect data which were analyzed using frequencies, percentages and simple linear regression. Results of the study revealed that workload and inadequate remuneration were the major causes of occupational stress among central administration administrative assistants. In order to relieve stress, they often visit other colleagues in their offices to discuss matters unrelated to their work thereby affecting productivity at the university. University management commitment to employee-related issues such as paying attention to workload, conflict, working environment, supervisor's recognition of outstanding work output of staff and the introduction of proper stress management training programmes were perceived as significant steps which if practiced, could contribute to improved productivity of staff.

Introduction

Occupational stress and other psychological factors are recognised worldwide as a major challenge to workers' health and the health of organisations (Jamal, 2007; Raza, 2012). Occupational stress has been proved to adversely impact on individuals' psychological and physical health, as well as organisational effectiveness (Visotskaya, Cherkashina, Katcin, & Lisina, 2015). Workers who are stressed are more likely to be unhealthy, poorly motivated and less productive. Organisations whose workers are stressed are less likely to be successful in a competitive market (Lackritz, 2004; Beehr, Jex, Stacy & Murray, 2000). Studies estimate that work-related stress alone costs the business and government of European countries about twenty billion Euros (€20 billion) in absenteeism and related health costs, in addition to the price

of lower productivity, higher staff turnover and reduced ability to innovate (European Commission's Report, 2004). In the United Kingdom during the year 2000, one in every five workers was extremely or very stressed as a result of occupational influence (World Health Organization's Report, 2005). In Sweden during the year 1999, 14% of the 15,000 workers on long sick leave said the reason was stress and mental strain. The total cost of sick leave to Sweden in the year 1999 was £2.7 billion (World Health Organization, 2005).

In the United States, problems at work seem to be more strongly associated with health complaints than any other life stressors, including financial or family problems. Out of the 200 respondents in a survey, 68% confirmed that they had to work very fast and 32% never had enough time to finish their work. The health care expenditure in the United State of America is 50% greater for workers who report high levels of stress at work (Kortum-Margot, 2007). Seyle (1981) defined stress as "the no specific (physiological) response of the body or any demand made upon it" (p.45). Seyle viewed stress as the individual response to the demand of his environment. Human beings react to stress by exhibiting anxiety, hopelessness, depression, and irritability. For most people, every day of their lives contains some stress. Some of these experiences of stress are welcoming whereas others bring grief. Research indicates that the phenomenon of occupational stress in universities is widespread and is increasing exponentially. A key finding on a national survey conducted in 2002 on occupational stress in Australian universities is that approximately 50% of Australian University staff taking part in the survey were at risk of psychological illness compared with only 19% of the Australian population (Winefield, Gillespie, Stough, Hapuarachchi, & Dua, 2002).

A study executed in 2004 at the University of Luton and the University of Leeds on stress and work-life balance in academic and academic-related employees in the United Kingdom, found 69% admitting that they experienced high levels of job stress (Kinman, & Jones, 2004). Winefield, Gillespie, Stough, Dua, and Hapuarachchi (2003) found that the major cause of occupational stress among Australian University staff was financial difficulties which had been imposed on them and led to serious consequences for their psychological well-being. Occupational stress in higher education is a worldwide problem which needs to be frequently debated and researched (Nabirye,

Brown, Pryor, & Maples, 2011). According to Olivier, De Jager, Grootboom, and Tokota (2005), 'the pressure of change, as well as challenges such as financial constraints, increased workloads, the information and technological revolution, changes in student demographics and student levels of preparedness, changes in management styles and structures, tended to become stressors and taking their toll on many tertiary staff' (p.175).

In Africa and specifically in Ghana, researches on job stress conducted on academic staff show that administratively, the lecturers work as counsellors, examination officers, postgraduate coordinators, departmental heads, directors, deans and many other positions of responsibilities make them extra busy (Kusi, Mensah & Gyakyi, 2014). With regard to their teaching responsibilities, some teach extremely large classes (up to 400 students per semester), supervise theses, dissertations and project work. Indeed, in some extreme cases, some lecturers supervise up to 30 students per semester, owing to the running of both regular and sandwich programmes. Nonetheless, lecturers are expected to publish high-quality research in reputable journals to be promoted within the institution. Thus, the lecturers work is under increasing pressure to meet targets set by the university. However, attempts made by the university to support the academic staff to cope with this increasing pressure appears to prove futile, as a research conducted by Gyakyi (2013) suggested that the lecturers do not patronise the counselling services provided by the university to enable them overcome such pressures. In a similar manner, the workload of administrative assistants is very hectic. They work as secretaries to various committees, rapporteurs, administrators and secretaries in their various offices. It is observed that in a semester, an administrative assistant is known to attend more than twenty meetings for committees and boards to serve as recorder (sometimes under an assistant registrar). After the meeting, they are supposed to put together in a chronological manner the agenda that were discussed in the meeting and report them as was stated by the various authors of the statements during the meeting. In many cases, right after attending the meeting, it is also expected that the administrative assistants are to serve students and sometimes there is the likelihood that majority of them are not able to complete the days' work and will stay in after work to complete it before going home. Even sometimes, these administrative staff have to travel with

their heads of department for meetings and other conferences or seminars outside the university campus.

Factors Associated with Occupational Stress and their Effects on Job Performance

Numerous studies found that job stress influences employees' job satisfaction and their overall performance (Chaudhry, 2012). Because most of the organisations have become more demanding for better job outcomes and in the quest to meet the demands of the occupation, stress builds up in workers and in some instances affects their performance negatively. Ahsan, Abdullah, Fie, and Alam (2009) have found that the determinants of job stress among public university academicians include management roles, relationship with others, workload pressures, homework interface, role ambiguity, and performance pressure. Ahsan *et al.* (2009) further found that there was a significant negative relationship between job stress and job satisfaction. Gillespie, Walsh, Winefield, Dua, and Stough (2010) delved into university staff perceptions of the causes, consequences and moderators of stress and discovered that there were higher levels of stress among academic staff than the general staff. Five major sources of stress were identified including: insufficient funding and resources, work overload, poor management practice, job insecurity, and insufficient recognition and reward. According to Gillespie *et al.* (2010), the majority of groups reported that job-related stress was having a deleterious impact on their professional work and personal welfare. Mechanisms reported to help staff cope with stress related to aspects of the work environment (support from co-workers and management, recognition and achievement, high morale, flexible working conditions), and personal coping strategies (stress management techniques work/non-work balance, tight role boundaries and lowering standards) [Ismail, Yao & Yunus, 2009]. The findings provide a timely insight into the experience of stress within universities.

Occupational stress among university staff can have a profound impact on student learning outcomes and thereby on the contribution that such institutions make to society. Organisational performance can be affected by decreasing productivity and efficiency which affects the organisation negatively. According to Catano *et al.* (2010) stress surveys in U.K. and Australian universities demonstrated high occupational stress

levels among faculty which was not the case among Canadian university staff. El Shikieri and Musa (2012) found job stressors among Sudanese university staff to be role conflict and ambiguity, lack of participation in decision making, lack of authority, workload, unsatisfactory working conditions and interpersonal relationships. They also found that job stressors negatively affected the general physical health of employees, their job satisfaction and performance as well as their commitment. They recommended that the university should, for example, increase the number of staff needed to perform the tasks and/or decrease the number of students enrolled. Similarly, Keshavarza and Mohammadib (2011) researched to determine the factors associated with occupational stress and their relationship with organisational performance at the University of Tehran with the results indicating that most of the employees experienced high degree job stress which affected job performance negatively. Due to role expansion of university staff which is occasioned by expanding enrolments in universities without a proportional increase in human resources occupational, stress keeps increasing (Sun, Wu & Wang, 2011). The consequences of occupational stress are dire. Shen, Yang, Wang, Liu, Wang and Wang (2014) discovered that stress can lead to depression or show of depressive symptoms among university staff. Poor coping ability may worsen stress-related illnesses (Blix & Lee, 1991).

Statement of the Problem

There have been many studies conducted to find the effects of stress on job performance. In their study on the effects of occupational stress on the University Teachers in South India, Reedy and Poornima (2012) found that occupational stress contributes to organisational inefficiency, high staff turnover, absenteeism, decreased quality and quantity of practice, increased costs of health care, and decreased job performance. Malek (2010) found a strong correlation between stress and job performance of university staff in a research on the impact of job stress on job performance among university staff in Malaysia. Similarly, Nortje (2007) concluded from a research conducted on the effects of stress in the workplace at the Tshwane University of Technology that, organisations whose workers are stressed are also less successful in a competitive market. In their research, Jehangir, Kareem, Khan, Jan and Soherwardi (2016) who focused on the effects of job stress on job

performance among female academic staff of the University of Pakistan, found that the causes of job stress among the female academics were excessive workload, unhealthy and dangerous working environment, insufficient resources, conflicting demands, lack of professional respect, lack of promotion chances, inadequate pay and benefit, domestic problems and marital problems. It was found that job stress negatively affected the performance of the female academic staff.

In Ghana, Kusi, Mensah and Gyakyi (2014) found that occupational stress had various effects on the job performance of academic staff of the University of Education, Winneba ranging from absenteeism, aggression, poor quality of work, anxiety, depression, forgetfulness, staff conflict and ill-health. Stress and teacher performance were found to be significantly related in a study conducted on work stress and performance of faculty members of a Ghanaian Technical University by Azila-Gbetteor, Atatsi, Dodor, Adade, Tsorhe and Neequaye (2017). Andoh and Appiah's (2017) research on the effects of stress on the performance of staff of the College of Distance Education, University of Cape Coast, revealed that workload caused stress among the staff which affected their performance. Available literature seems to indicate that no research has been conducted to find out the effects of occupational stress on the job performance of administrative assistants of the public universities in Ghana. One of such key public University in Ghana is investigated in this study to find out the effects of occupational stress on the job performance of administrative assistants who work in the central administration, paying attention to the causes, symptoms, effects and management and coping strategies adopted. Since the administrative assistants at the central administration offer a huge support to the functioning of the university management and the university as a whole, this study will help to develop a better understanding of their occupational stress and job performance. The research questions that guided the conduct of the study are:

1. What factors contribute to occupational stress among the administrative assistants?
2. What stress symptoms are experienced by administrative assistants?
3. What are the influences of stress on job performance among administrative assistants?

4. What management and coping strategies are adopted by administrative assistants to deal with stress-related problems?

Methodology

The descriptive research design was adopted in this study with the concepts and issues assessed through the quantitative method using mainly questionnaires. According to the Division of Human Resource of the selected University of study, the population of administrative assistants of the central administration was 300 in 10 sections. The 10 sections were the Office of the Pro-Vice-Chancellor, Office of the Registrar, Directorate of Finance, Directorate of Internal Audit, Directorate of Physical Development and Estate Management, Directorate of University Health Services, Division of Legal Consular and General Services, Division of Human Resource, Division of Academic Affairs and Division of Public Affairs. The sample was made up of 150 administrative assistants, as a sample of about 150 is considered appropriate for a population of 300 (Krejcie & Morgan, 1970). Stratified sampling was used to select the respondents by rank. This was to ensure proportional representation as they exist within the population. Simple random sampling procedure was used to select respondents from the sub-groups which are, the Administrative Assistants, the Senior Administrative Assistants, Principal Administrative Assistants and Chief Administrative Assistants. Though most of the completed questionnaires were returned later on appointed dates, a few were collected on the spot. The return rate of the questionnaires was 100%. Data analysis was done with the use of Statistical Package for Service Solutions (SPSS version 23.0). While research questions one, two and four were all analyzed using frequency counts and percentage tables, research question three was analyzed using simple linear regression.

Results and Discussion

Factors contributing to occupational stress among Administrative Assistants

This research sought to find out the factors that contribute to occupational

stress among administrative assistants of the University's central administration. The results displayed in Table 1 indicate that the administrative assistants were mostly dissatisfied with all the stated factors and as such contributed to increasing their stress. The factors they were dissatisfied with included the scope of the job and responsibilities, salary and allowance, consideration of duties and responsibilities, physical working conditions, workloads which could not be completed during working hours, relationship with supervisors, job security of senior staff, feelings about the working situation at the present time, job stretching one's skills and ability to the full and treatment by supervisors.

Table 1: Factors Contributing to Occupational Stress among Administrative Assistants in Central Administration

<i>Occupational Stress Factors</i>	<i>VS N(%)</i>	<i>S N(%)</i>	<i>NSDS N(%)</i>	<i>DS N(%)</i>	<i>VDS N(%)</i>	<i>Total N(%)</i>
Job scope and responsibility	3(2.0)	6(4.0)	9(6.0)	27(18.0)	105(70.0)	150(100%)
Salary and allowance, considering duties and responsibilities	0(0.0)	0(0.0)	3(2.0)	15(10.0)	132(88.0)	150(100%)
Physical working conditions	0(0.0)	12(8.0)	6(4.0)	18(12.0)	114(76.0)	150(100%)
Workload which cannot be completed during working hours	0(0.0)	3(2.0)	0(0.0)	15(10.0)	132(88.0)	150(100%)
Relationship with supervisors	0(0.0)	27(18.0)	21(14.0)	33(22.0)	69(46.0)	150(100%)
Job security for senior staff	0(0.0)	6(4.1)	9(6.1)	51(34.7)	81(55.1)	150(100%)
Feelings about the working situation at the present time	0(0.0)	0(0.0)	3(2.0)	15(10.0)	132(88.0)	150(100%)
Fairly treated by your supervisors	0(0.0)	12(8.0)	0(0.0)	51(34.0)	87(58.0)	150(100%)
Job making full use of your skills and ability	0(0.0)	9(6.0)	6(4.0)	24(16.0)	113(74.0)	150(100%)

Key: *VS* (Very Satisfied), *S* (Satisfied) *NSDS* (Neither Satisfied nor Dissatisfied), *DS* (Dissatisfied) *VDS* (Very Dissatisfied).

The responses given are in agreement with the findings of Newman and Kinney (2004), who asserted that the university administrators they studied blamed their occupational stress on various aspects of the work environment which fell in the category of services they provided to students, university management and the university system as a whole. They are work domains to which administrators may attribute their stress. Henry and Evans (2008) noted that an increase in workload, hostile work environment, downsizing and shift work can result in occupational stress. They added that often, workload remains immense even though employees do their best to complete them, and the employees may feel stressed as a result. Codrington (2006) found out that work overloads and time constraints were significant contributors to work stress among community nurses, and this was supported by Al-Aameri (2003), who mentioned in his studies that one of the six factors of occupational stress is pressure originating from workload. Furthermore, Quick (2000) expressed the view that rapidly changing global scene is increasing the pressure of workforce to perform maximum output and enhance competitiveness. Indeed, to perform better on the job, there is a requirement for workers to perform multiple tasks in the workplace to keep abreast with changing technologies.

Stress symptoms experienced by administrative assistants

This research also sought to find out the common stress symptoms experienced by administrative assistants with results on this aspect displayed in Table 2.

Table 2: Common Stress Symptoms Experienced by Administrative Assistants in Central Administration

<i>Stress Symptoms</i>	<i>Yes N(%)</i>	<i>No N(%)</i>	<i>Total N(%)</i>
Severe Headache	126(85.7)	24(14.3)	150(100)
Irritability	33(22.0)	117(78.0)	150(100)
Emotional Illness	105(70.0)	45(30.0)	150(100)
Poor Judgement	60(40.0)	90(60.0)	150(100)
Fatigue	96(64.0)	54(36.0)	150(100)
Depression/General Unhappiness	96(64.0)	54(36.0)	150(100)
Less Successful in Competitive Market	84(56.0)	66(44.0)	150(100)

The results show that apart from irritability and poor judgement, the common stress symptoms that were experienced by administrative assistants were severe headache, emotional illness, fatigue, depression or general unhappiness and low success in a competitive market. The responses confirm findings from other researches carried out in the area of discussion. The finding is slightly similar to that of Jonge, Landsbergis and Vegchel (2005) who researched into this enterprise and noticed that physical symptoms that may occur because of occupational stress in the organisation include stroke, fatigue, headache, stomach aches, chronic mild illness, sleeping problems, muscular aches, disturbances and eating disorders. Psychological and behavioural problems that may be developed include anxiety, irritability, alcohol and drug use, feeling powerless and low morale. They also added that stress is normally associated with cardiovascular diseases, gastrointestinal disturbances, as well as mental and emotional illness. The environment in a developing country such as Ghana, where the family system is supportive and where social interactions are encountered more, may be a contributing factor to the less severe symptoms of stress.

Effects of stress on job performance among Administrative Assistants

The research further sought to find out the effects of stress on job performance among the administrative assistants. The results as displayed in Table 3 show that the computed t-value for the statement on the fact that the university has poor working environment which negatively affects job performance was 1.89 with the computed regression coefficient value being 0.67. Paying attention to the second statement, it was revealed that there was a t-value of 1.74 and a regression coefficient of 0.90. The results on the management style in the university indicated that it contributed to 88% of low job performance among administrative assistants. This is evident from a computed t-value of 0.81 and a regression coefficient of 0.88. The computed t-value and a regression coefficient for unavailability of working equipment were 2.23 and 0.90 respectively. The result concerning the university not having good working conditions to enhance job performance also showed computed t-value of 2.08 and a regression coefficient of 0.76.

Table 3: Occupational Stress and Job Performance of Administrative Assistants of the Central Administration

<i>Occupational Stress and Job Performance</i>	<i>T-value</i>	<i>Regression Coefficient (Sig. 2-tailed)</i>
Poor working environment negatively affects job performance	1.89	0.67
Unclear promotion rules leads to low job performance	1.74	0.90
Management style which leads to low job performance	0.81	0.88
Unavailable working equipment leads to low job done	2.23	0.90
No good working conditions to enhance job performance	2.08	0.76
Poor salaries and rewards contribute to low job performance	0.48	0.80
Poor conditions of service lead to industrial unrest	1.83	0.87
Stress at work affects work output	0.26	0.89

Additionally, a computed t-value of 0.48 and a regression coefficient of 0.80 were obtained on the statement on poor salaries and rewards contributing to low job performance among administrative assistants. Furthermore, the results showed that for poor conditions leading to unrest among administrative assistants, the computed t-value was 1.83 while the regression coefficient was 0.87. Finally, the results showed a t-value of 0.26 and a regression coefficient value of 0.89 for the statement relating to stress at work place affecting work output.

The above findings show that occupational stress affects job performance and affirm the assertions of Campbell, Machinery, and Wise (2001), who postulated that poor organisational climate will influence and affect the performance of employees. They added that improving the work environment can decrease the risk of illness of employees thereby reducing the rate of stress. Again, Winefield *et al.* (2002) maintained that stressed staff who remain within the profession, on the other hand, are likely to be less productive in key areas such as administration, students' behaviour management, responsiveness to students and relationships with other stakeholders.

Management and coping strategies to deal with stress-related problems

The study further sought to find out the management and coping strategies adopted by respondents to deal with stress-related problems. Table 4

Table 4: Management and Coping Strategies to deal with Stress-Related Problems

<i>Management/Coping Strategies</i>	<i>Frequency</i>	<i>Percentage (%)</i>
Clear management style in terms of communication to staff	3	2.0
Proper working environment for all staff	3	2.0
Workload must be reduced	66	44.0
No discrimination among members	3	2.0
Salaries and allowances must be paid on time	6	4.0
Promotion rules must be specifically based on job performance	6	4.0
Supervisors should give subordinates freewill to perform job	3	2.0
Management should involve subordinates decision making	6	4.0
Putting corrective measures to amend the situations	3	2.0
Reduce role conflict	3	2.0
More remuneration for staff	3	2.0
Staff could request for annual leave days	6	4.0
Opportunities for advancement should be clear and open	6	4.0
Regular sensitisation on occupational stress management	3	2.0
Management should listen to and address staff concerns on time	3	2.0
Management should motivate the staff well	3	2.0
Salaries and allowances to senior staff should be attractive	21	14.0
Total	150	100.0

indicates that 66(44%) of the respondents suggested the reduction of workload of the administrative assistants, with 21(14%) suggesting that salaries and allowances to senior staff should be attractive, while 30(20%) and 3(2%) each suggested that there should be clear management style in terms of communicating with the staff, proper working environment for staff, reduction of job responsibility, supervisors giving subordinates opportunity to freely perform job

responsibility, putting in place corrective measures to amend the situation, reducing role conflict, increased remuneration for the staff, staff requesting for annual leave days, regular sensitisation on occupational stress management, addressing the concerns of staff on time and motivating the staff well respectively. Again 6(4%) of the respondents each suggested that salaries and allowances must be paid on time, promotion rules must be specifically based on job performance, management should involve subordinates/senior staff in decision making, staff to have the chance to request for annual leave days, and opportunities for advancement and promotion to be clear and open.

Coincidentally, the suggested measures to address the problem of work-related stress share similarities with what other researchers on the topic have proposed. For example, White (2005) asserted that in order to prevent role conflict, organisations should function according to the classic organisational theory principle of unity of command, which is that employees should be supervised by a single superior and work according to a single plan. White added that an organisation which cares for its employees must spare them the ‘crossfire’ of two or more superiors who have incompatible work instructions and expectations. Again, White (2000) opined that improving the work environment can decrease the risk of illness of all employees thereby reducing the rate of stress.

Conclusions

Based on the findings of the study, it could be concluded that factors such as the scope of the job and responsibilities, physical working conditions, heavy workloads which could not be completed during working hours, one’s relationship with supervisors, job security of administrative assistants and unfair treatment contribute to occupational stress among university administrative assistants. Conditions such as severe headache, irritability, emotional illness, poor judgement, fatigue, depression or general unhappiness and low success in competitive market were common stress symptoms experienced by administrative assistants. These symptoms affect the job performance of administrative assistants negatively. Additionally, it could be observed from the study that poor working environment, unclear job promotion rules, and unavailability of working equipment, poor salaries and rewards and

delay in promotion among administrative assistants of the university negatively affect their job performance. The study also revealed that University administrative assistants facing stress on the job do not look unconcerned but make conscious effort to find other sources of coping with the situation.

Recommendations

Based on the findings and conclusions from the study, the following recommendations are made:

1. University administrative work should be made more attractive by providing the administrative assistants with the necessary materials like scanners, photocopiers, and regular Internet access, that will facilitate the administration process of the University. In addition, the infrastructure of the university should be well designed to cater for the facilities to enhance the work of the administrative assistants.
2. Another issue of interest is the working condition of administrative assistants. An improvement of the service conditions in the university will be much welcome. The thrust of majority of grievances of university administrative assistants centre around working conditions. The institution of an insurance scheme for the university workers including administrative assistants who have worked for a stipulated period of time is likely to be a major booster in the working conditions of the university workers.
3. Administrative assistants of the University should be recognised for good work done. Staff members who excel in the performance of their duties must be recognised and rewarded. Such a reward need not necessarily be monetary or material, but simple words of encouragement and commendation could bring joy and happiness to the hearts of hardworking senior staff. The university authorities and stakeholders must look out for such hardworking staff for reward and commendation.
4. Periodic seminars should be organised on stress and its management by the Training and Development Unit of the

university in collaboration with the University Health Services. This will go a long way to enlighten the University administrative assistants on the subject of stress, its causes and symptoms, which will help in managing stress-related problems among administrative assistants in the University.

5. Finally, it is recommended that the university staff including senior administrative assistants should be encouraged to visit the university's guidance and counselling centre whenever they are faced with stress-related problems.

For the administrative assistants, it is recommended that the following self-helped tips should be observed as a way of dealing with stressful situations:

1. They should make time to rest or take their leave.
2. They should try to delegate responsibilities or share them, where possible. If one makes oneself indispensable, there is the likelihood of one feeling highly stressed.
3. Physical exercises have been proven to have a beneficial effect on a person's mental and physical state. For administrators, physical exercises are an extremely effective stress-buster.
4. Administrators could adopt some breathing technique in time of stress. This technique can slow down one's system and help one to relax.

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Placement of Graduates of the Institute for Educational Planning and Administration in Sectors of the Ghanaian Economy: Insights from a Nation-wide Tracer Study

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Abstract

This article examined the determining variables Ghanaian employers gave considerations to in the job placement of graduates of the Institute for Educational Planning and Administration (IEPA). This research endeavour was undertaken against the backdrop of a dearth of information concerning how IEPA graduates were placed in the labour market to enable them contribute their quota towards Ghana's developmental agenda. The concurrent mixed methods research design was employed, whereby semi-structured open ended interviews conducted with 16 employers were complemented by data derived from self-administered questionnaires distributed to 407 IEPA graduates. The data generated from the questionnaire responses were coded and analysed using descriptive statistics in the form of frequencies whilst the interview data were recorded, transcribed and analysed thematically. The findings revealed that the first three factors employers gave consideration to in the placement of IEPA graduates were degree specialisation, educational preparation and training, and experience of prospective employees. The findings suggested further that the professional training graduates received from IEPA were, to a large extent, aligned to/with their work schedules. In light of these findings, it was concluded that employers of IEPA graduates generally were consistent with the best practices admonished in the human resource development literature regarding placement of employees. It was recommended against this backdrop that IEPA intensifies its collaborative efforts with the Ministry of Education and its allied agencies to ensure she continually fulfils her mandate of preparing graduates for careers within the Ghanaian education sector as a whole.

Introduction

From the organisational point of view, employee placement and/or deployment is considered as an indispensable activity for every organisation's human resources department. This, according to the human resources development and utilisation literature (for example, Armstrong, 2009; Chester & Beaudin, 1996; DeBolt, 1991; Drummond,

Grimes & Terrell, 1990; Grossman & Thompson, 2004; Nudzor, 2016; Nudzor, Ampah-Mensah, Agbevanu, & Nyame, 2019; Rebore, 2007; Wood & Payne 1998), is because from time to time, new employees get recruited whilst old ones are transferred or reassigned to new schedules and positions in their respective places of work. It is in line with this same reason why the human resources management literature makes the point forcefully for employee placement not to be viewed as a one-time human resource development practice or process but as an ongoing concern for organisations that are serious about achieving ‘success’ in their endeavours in the labour market (Armstrong, 2009; Nudzor, 2016; Rebore, 2007).

This article reports on a Ghanaian nation-wide tracer study which examined how graduates of the Institute for Educational Planning and Administration (IEPA) were placed and utilised by their employers, and how efficient and effective the graduates were in the Ghanaian job market. The IEPA was established in August, 1975 on the basis of a joint agreement between the Government of Ghana and UNESCO/UNDP, and as a result of the felt need at the time to set up a ‘hub’ for the training of educational planners, administrators and other specialists in the field of education (Owusu & Dzinyela, 1994, cited in Nudzor, 2016). According to the historical records, the IEPA was established and mandated *inter alia* to: generate empirical knowledge and research to inform educational policy and practice; provide education and training aimed at improving planning, leadership and management capabilities of personnel in the education sector; and improve the operational efficiency of personnel within the GES and educational institutions in Ghana (Owusu & Dzinyela, 1994, cited in Nudzor, 2016).

Since her establishment, the IEPA has contributed (and still continues to contribute) her quota towards the development of Ghana. This is particularly evident in the leading role she assumes in the preparation of graduates for careers within the Ghanaian educational sector and other sectors of the general economy. In addition to being the ‘hub’ for the training of future educational planners and administrators of the nation (Nudzor & Danso, 2015), the IEPA plays a leading role in international-funded capacity strengthening projects in educational leadership and planning throughout the country. For example, IEPA has developed strong working relations with the International Institute of Educational Planning (IIEP) of UNESCO and had recently

partnered the IIEP in delivering a distance education programme in Educational Sector Planning in Ghana. Most recently (i.e. between 2005 and 2010), the IEPA collaborated with Vrije Universiteit in Amsterdam to undertake a Netherlands Universities Foundation for International Cooperation (NUFFIC) funded research project that enhanced leadership and management capacities of Lecturers of Ghanaian Polytechnics (now upgraded to Technical Universities). The IEPA was also involved deeply in the recent past in DFID-sponsored 'EDQual' research partnership with the University of Bristol and the University of Dar es Salaam which researched into educational leadership and quality issues in Ghana and Tanzania. Most recently, IEPA has collaborated with the Ghana National Commission for UNESCO in designing and conducting sensitisation workshops on the Education 2030 Agenda in the Brong Ahafo, Ashanti and Central Regions of Ghana.

In terms of the academic courses she offers, the IEPA currently runs leadership, management and administration oriented graduate programmes leading to the award of M.Ed in Educational Administration; M.Phil in Educational Planning, Educational Administration and Administration in Higher Education (University of Cape Coast, 2016). In addition to these graduate programmes, the institute offers a Doctor of Philosophy (PhD) programme in Qualitative Research. This programme was introduced deliberately, and with the view to strengthening and/or enhancing the research capacities of early career researchers of the University of Cape Coast and other professional research institutions in the country in the area of qualitative research. It is also heart-warming to note that IEPA has recently obtained clearance from the Academic Board of the University of Cape Coast for the introduction of new programmes, namely: MPhil/PhD in Educational Leadership, MPhil/PhD in Monitoring and Evaluation in Education, MPhil/PhD in Economics of Education, PhD in Educational Administration, PhD in Educational Planning, and Postgraduate Diploma in Quality Assurance in Tertiary Education. These programmes are being introduced to fill in human resource gaps in these critical areas of the Ghanaian educational system (Nudzor *et al.*, 2019).

Thus, through these training and capacity building programmes vis-à-vis the academic courses she renders, IEPA has assumed a leading role in the preparation of graduates for careers within the Ghanaian education sector and other sectors of the general economy. Whilst this

undoubtedly was a significant contribution to the development of the nation, it was unclear how her graduates were placed and utilised effectively in the labour market to enable them contribute their quota towards the developmental agenda of the country. A baseline tracer study commissioned by the IEPA herself in the Central Region in 2014 in this direction (Nudzor & Danso, 2015; Nudzor, 2016) produced interesting results worth citing. Among other things, the findings suggested that although employers were aware that educational preparation and training ought to take pre-eminence in determining the job placement of IEPA graduates, they prioritised factors such as seniority, rank, wishes, career prospects and trustworthiness of prospective employees. Also, the findings indicated that even though the graduate employees were utilised in ways that were generally seen to be consistent with their degree specialisations, they performed ‘other’ supplementary roles for which they received no professional training from IEPA. As interesting as these insights from the baseline study were, they represented the views of employers and IEPA graduates from only one out of the regions of Ghana. This thus called for a nation-wide tracer study which, apart from probing these issues further, was to inform a revision, if need be, of IEPA’s curricula and general modes of training and course delivery to ensure that she produces efficient and effective graduate employees to serve the human resource needs of the education sector in particular, and other sectors of the Ghanaian economy (Nudzor *et al.*, 2019).

This current article reports on an aspect of the nation-wide tracer study. Essentially, this article examined the job placement of IEPA graduates in the Ghanaian labour market. This was proposed against the backdrop of a dearth of information concerning how IEPA graduates were placed in the labour market to enable them contribute their quota towards Ghana’s developmental agenda (Nudzor *et al.*, 2019). In line with the general purpose of the article, the overarching question was: ‘What criteria did employers use to determine the job placement of IEPA graduates?’ Based on this overarching research question, the following three sub-research questions were posed:

1. In what sectors of the Ghanaian economy were IEPA graduates employed?

2. What factors did employers give consideration to in the job placement of IEPA graduates?
3. To what extent did the degree specialisation of IEPA graduates inform the placement criteria of their employers?

Thus, in this article, the views of both employers of IEPA graduates and the graduates themselves are presented to gain a better insight into what criteria informed the job placement of IEPA graduates. In order to accomplish this onerous task, some key words in the context of the article are operationalised as follows. First, 'employee placement' is conceptualised simply as the assignment of a new employee to a job-role or the re-assignment of an existing employee to a different job-role. Second, 'employers' are operationalised to mean chief executive officers or representatives of key organisations in which IEPA graduates are employed. Third, 'IEPA graduates' are referred to in context to mean employees of organisations in Ghana who had pursued and obtained academic/professional qualification in any of IEPA's programmes of study, specifically MA, MEd, MPhil and PhD.

So clearly, this section of the article has explored the research context, whereby issues concerning IEPA's history of establishment, mandates, exploits and the research problem necessitating the study on which this article is based are highlighted. Before the research methods employed for the study are elucidated, a brief review of literature, and a crisp description of the theoretical resources adopted as a conceptual framework for the study are presented in the following two sections to conceptualise and set in context issues surrounding employee placement.

Conceptualising Employee Placement

In the words of Kumar and Sharma (2001) after the selection of personnel for job-roles, the personnel manager needs to do a judicious and scientific placement of the new recruits. In giving clarity to the term, Dessler (2008, cited in Kavoo-Linge & Kiruri, 2013) described placement as the process of assigning an employee to a position within his or her sphere of authority where the employee has a reasonable chance for success. Succinctly put, employee placement is concerned basically with the allocation of an employee to a job-role.

Several authors (for example Rebores, 2007; Dessler, 2008 cited

in Kavoo-Linge & Kiruri, 2013; Harms, 2009) contended that employee placement is important in an organisation because it affects the employee's performance as well as the overall success of the organisation in which the employee is engaged. Dessler (2008 cited in Kavoo-Linge & Kiruri, 2013, p.213), for example, argued that, defective placement can result in "poor employee performance which in turn may perhaps lead to reduced organisational efficiency, increased employee attrition, and frustration of personal and professional ambitions of the employee". Dessler proceeded to assert, on the contrary, that an apt job placement fosters employee's personal growth, provides a motivating climate for employees, maximizes performance, and increases the chance that organisational goals would be achieved (p.213). In the same line of reasoning, Rebore (2007) maintained that, proper placement of employee results in better motivation which in turn results in better performance, lower rate of absenteeism, lower rate of labour turnover, better utilisation of materials and machines, reduced cost of supervision, and keeps the employee well-satisfied and self-fulfilled.

Nübler (1997) added to these useful points by suggesting, albeit covertly, that effective deployment of prospective employees is a sufficient condition for maximum achievement of individual, collective, organisational and/or national goals and objective. In illuminating the indispensability of employee placement as a significant human resources development practice, Nudzor (2016), for example, outlined some important factors that ought to be given due consideration by employers or their agents when assigning prospective employees positions and/or designation in organisations. Instructively, Nudzor (2016) identified the most crucial factors for ruminating to include: educational preparation and training; certification; experience; and working relationships of employees. Other equally important factors Nudzor enumerated, but which he acknowledged that the human development literature (for example, Armstrong, 2009; Grossman & Thompson, 2004; Olufemi & Adebola, 2012; Oppong & Arthur, 2015; Rebore, 2007; Wood & Payne, 1998) admonished to be considered with discretion and level headedness are: wishes of prospective employees; seniority; rank; and career prospect of candidates. Regarding wishes of prospective employees as a determinant of job placement, for instance, Nudzor (2016) explained that it serves a useful purpose when placement

is undertaken in harmony with wishes of employees. However, he admitted that the literature throws out a word of caution, indicating that a significant cause of low morale among workers, especially teachers, is assigning grade levels and subject areas that they wished for but which they find undesirable. Against this backdrop, Nudzor drew on Rebores (2007), advice to caution that wishes of prospective employees can be considered as a determining variable in employee placement provided it did not compromise requirements of the positions employees request or clamour for, the organisation's policies and the general welfare of other employees (Nudzor, 2016).

Concerning seniority as another determining variable in employee placement, Nudzor (2016) made the point aptly that although it is a defensible criterion in making placement decisions, it should be given consideration only after 'other' variables indicated in this review have been considered. This, he argued, is in tandem with the suggestion of the human development literature (e.g. Rebores, 2007) to the effect that seniority is indeed a valuable criterion when it comes to reassigning employees, and that in situations such as this, it is prudent for 'senior' employees (i.e. those who have served the organisation for the longest period) to be given the first choices. In cases of involuntary reassignments, which sometimes become necessary because of unexpected vacancies, however, Nudzor observed that the literature advises that such positions should be given to employees with the least seniority to promote peace and harmony within the organisational structure.

So as has become immediately clear, the review of the human resource management literature for the purpose of this article raised three very salient points about employee placement. First, the review showed that wishes of employees coupled with the issues of seniority and/or rank are examples of variables used in determining employees' job placement, but that these are only useful after other most important variables such as certification, educational preparation and training, experience, and employees working relationships have been taken into consideration. Second, and following up on the first point, the review illustrated the point that although certification, educational preparation and training, experience, and employees working relationships are necessary prerequisites for organisational success, the actual panacea to optimal attainment of organisational goals and objectives rests largely

with how employees are placed and deployed. Third, the insights in this section of the article portrayed employee placement clearly as quintessential for every organisation because it affects the employee's performance as well as the overall success of the organisation in which the employee is engaged.

Theoretical Resource

The human capital literature (for example, Almendarez, 2010; Becker, 1964; Saleem & Balakrishnan, 2015; Schultz, 1993 cited in Nudzor *et al.*, 2019) contend that an educated population is a productive population because formal education and training is highly instrumental and necessary to improve the productive capacity of a nation. This argument places strong emphasis on the stock of knowledge, skills and abilities embedded in an individual, which results from natural endowment and subsequent investment in education, training and experience which are critical for the development of every nation. In extending the human capital theorists' argument, the World Economic Forum (2017) adds that the knowledge and skills people possess enable them to create value in the global economic system. This implies that human capital (knowledge, skills, abilities and experiences) acquired through education, when utilised efficiently and effectively, enables employees to contribute to economic growth and development of any nation.

In line with the broad purpose of the research on which this article draws coupled with the need to generate evidence-informed findings to address the research questions posed, the human capital development framework developed by World Economic Forum (2017) was relied upon as a theoretical and/or conceptual resource for the article. This framework focuses on four key elements (namely: capacity, development, know-how and deployment) which involve employees' knowledge, skills and abilities that give an organisation its economic value. First, 'capacity' looks at the level of formal education of employees as a result of past education investment. This relates contextually to the knowledge, skills, competences, instincts, abilities, processes and resources required by employees to enable them perform creditably in their jobs. Second, 'development' focuses on the process of equipping individuals within organisations with the understanding, skills and access to information, knowledge and training that enables

them to perform effectively. This involves provision of formal education for the next-generation workforce and continued upskilling and reskilling of the current workforce (The World Economic Forum, 2017). Third, ‘Know-how’ relates to personal competency traits of employees that enable them to perform towards achieving organisational goals. Fourth, ‘deployment’ represents employees or staff scheduling, placement and/or utilisation (Harms, 2009), and how they are able to contribute their quota towards attainment of organisational goals and objectives. Figure 1 shows the distinctive aspects to human capital development theory as conceptualised for the purposes of this article.

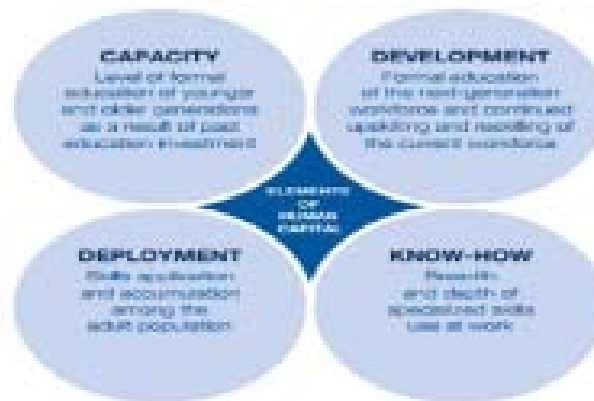


Figure 1: Theoretical resource for the study

Source: World Economic Forum, *The Global Human Capital Report* (2017, p.3).

Thus, as the framework illustrates, placement of employees is underpinned by the interplay of the employees’ capacity, development, know-how and deployment. Our view is that by adopting the human capital development framework as a theoretical lens or resource, efficient and effective employee placement is guaranteed owing to the interplay between and among these four variables. Conversely, the belief here is that efficient and effective employee placement cannot be attained by giving negligible attention to any of the four elements. All four elements of the framework need attention and consideration in equal measure. Seen in this light, the human capital development framework adopted as a theoretical lens offers a better prospect for examining issues regarding employee placement. Essentially, the framework points to key consideration for policy-makers and employers

seeking to enhance employee and organisational performance through efficient and effective job placement.

Methods

Considering the nature of the research problem and the context within which the study was undertaken, the concurrent mixed methods design was adopted for the research. Qualitative data in the form of insights from semi-structured open-ended interviews with employers of IEPA graduates was elicited for analysis. This was complemented by the analysis of quantitative data derived from self-administered questionnaires distributed to the IEPA graduate employees. Thus, apart from helping to ensure that the research findings were well triangulated, the concurrent mixed methods design was preferred because its use certainly guaranteed that the findings of the study have gone beyond speculations to be grounded in the evidence gathered (Creswell, 2009; Cohen, Manion & Morrison, 2010).

The population of the study consisted of two target groups of respondents. The first group comprised all the organisations in the various sectors of the Ghanaian economy (for example, Ghana Education Service, Technical and Traditional Universities, Colleges of Education, Ministry of Health, Banking/Financial institutions, Religious institutions, Political/Governance institutions etc.) that employed IEPA graduates. For the purposes of clarity, these organisations were designated simply as ‘employers’. The second group comprised all alumni of IEPA. That is, all graduates who had obtained MA, MEd, MPhil and PhD qualifications from IEPA. In all, a sample of 423 was obtained for the study. This number consisted of two groups of participants. The first group comprised 16 ‘employers’ of IEPA’s graduates who were selected purposively for semi-structured open-ended in-depth interviews to ascertain the factors that inform them regarding the placement of IEPA graduates in their organisations. The second group comprised 407 IEPA graduates themselves, selected from organisations within which employers were selected, and who were served with self-administered questionnaires regarding the purpose of the study.

Concerning the latter group (i.e. graduates of IEPA), an advertisement in respect of the nation-wide tracer study was placed in media outlets to bring this to their notice and solicit their involvement.

Following on from this, three modes of sampling were employed to select the 407 participants required to get a full complement of sample size for the self-administered questionnaires. The first of these approaches involved administering self-completed questionnaires to IEPA employees who responded to our invitation in the media and agreed to avail themselves to participate in the research study. This was followed by administering the same self-completed questionnaires to IEPA graduates who were known personally or whose organisations were known to the research team but who did not respond to our earlier invitation to participate in the tracer study. The third mode of sampling involved the use of the 'snow-ball' sampling technique to identify other alumni of IEPA through colleague participants and serve them with the self-administered questionnaires. Thus, the two groups of participants (i.e. the employers and the IEPA graduates) and the varying sampling strategies for their selection were employed as a means of attending to contexts and comparing knowledge claims among actors with different locations and orientations in what Vavrus and Bartlett (2006) refer to as 'vertically-bounded analysis'.

Regarding the procedure for data collection, ethical clearance for the research was first sought from the University of Cape Coast (UCC) Institutional Review Board since the original research this article reports on was supported financially by the Directorate of Research, Innovation and Consultancy of UCC. Subsequent to this, introductory letters were obtained from IEPA and copies were sent to institutions/organisations that were perceived to have employed IEPA graduates, informing them about the research study, its aims and benefits. This was followed by an advertisement about the research in a Ghanaian newspaper (i.e. the *Daily Graphic*) to invite graduates of IEPA to participate in the study. Thereafter, the research team was constituted and research data (i.e. both qualitative and quantitative) were collected concurrently. In adherence to research ethics, all respondents/participants consented to be part of the study by signing a consent form, and they were briefed and debriefed appropriately about the research processes and outcomes.

Owing to the composite data collection approach employed (typified by the use of mixed methods design), data generated were analysed both quantitatively and qualitatively. Data gathered through the self-completed questionnaires were edited, coded and entered into SPSS for processing and analysis. The results were presented using

descriptive statistics in the form of frequency tables, bar charts and pie charts to allow for statistical inferences and generalisations regarding the placement of IEPA graduates to be made. The semi-structured interviews with employers, on the other hand, were first coded and transcribed manually thereafter. The transcribed data were then cleaned by correcting errors in grammar without distorting the meaning. The data were subsequently categorised according to the research questions posed and then extrapolated to avoid category overlap. Finally, the key issues, observations and lessons were drawn from the data regarding the placement of IEPA graduates in their respective places of work.

Findings

For the purpose of clarity and succinctness, the findings emerging from the data are presented along the line of the research questions posed. But before this, the demographic characteristics of participants involved in the nation-wide tracer study on which this article is based are outlined in Table 1 to set the findings in context. The emphasis was on how the respondents pursue their programmes.

Table 1: Demographic Characteristics of Respondents/Participants

<i>Demographic Information</i>	<i>Questionnaire</i>	<i>Percentage (%)</i>	<i>Interview</i>
Total number of respondents/ participants	407		16
Gender of respondents/ participants	Male	206(50.6%)	13(81.25%)
	Female	182(44.7%)	3(18.75%)
	No response	19(4.7%)	
Programme	M. A. (Ed Admin)		
	Sandwich	9(2.2%)	
	M. Ed Regular	5(1.2%)	
	M. Ed Sandwich	273(67.1%)	
	M. Ed Distance	5(1.2%)	
	M. Phil. Regular	95(23.3%)	
	M. Phil. Top-up	6(1.5%)	
	No response	14(3.4%)	

It is clear from reading across Table 1 that out of the total number of 407 respondents who answered the questionnaire, 182 respondents (representing 44.7%) were females whilst 206 (representing 50.6%) were males. With regard to the 16 interviews conducted with employers on the other hand, only 3 of the participants were females whereas 13 of them were males. Also, whilst in the case of the questionnaire respondents, the participation of females could be said to be encouraging, the situation in the case of the interviews conducted unmasks clearly the cultural practice across developing countries (including Ghana) where employers feel reluctant, or for want of a better expression, refuse to appoint female workers to managerial positions. Also, reading down Table 1, 273 respondents, representing 67.1%, pursued and graduated with the Master of Education (MEd) degrees through Sandwich mode, clearly suggesting that IEPA has reached out to, and/or served most of her clientele largely through her MEd Sandwich programme.

In what Sectors of the Ghanaian Economy were IEPA Graduates Engaged?

This research question was important in helping the research team to follow-up, investigate and possibly understand the specific criteria or factors that determined the placement of the graduates. Seen in this light, the question was more of a precursor to the main issues surrounding the placement of IEPA graduates which this article explores. Figure 2 illustrates the findings to this research question.

Reading from Figure 2, it is clear that out of a total number of 407 respondents contacted, 382(93.9%) were employed in education related establishments across all levels of education provision and delivery in Ghana. This figure includes respondents who were staff of Ghana Education Service (GES), Colleges of Education (CoE) and Universities (i.e. Technical and Traditional Universities). This finding was not surprising, granted that IEPA was established and mandated as a human capacity development institute for Ghana's Ministry of Education (MoE) and her allied agencies for training of educational planners, administrators and other specialists in the field of education (Owusu & Dzinyela, 1994). In this respect, therefore, IEPA could be seen as fulfilling her mandate through the preparation of graduates for careers within the Ghanaian education sector as a whole.

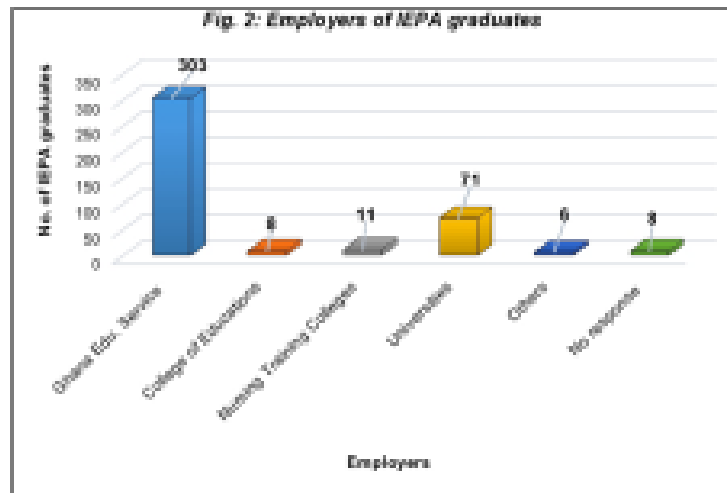


Figure 2: Sectors of the Ghanaian economy IEPA graduates were engaged

Also interesting from Figure 2 is the number of respondents employed in non-education related establishments. While 8 respondents did not indicate who their employers were, the Figure shows that 11 graduates of IEPA were employed by the Ministry of Health (MoH) whilst 6 were employees of 'other' organisations not identified. Taken together, this finding, in a sense, implied that aside the educational sector, IEPA may have been meeting the training needs of personnel in other sectors of the national economy. In another sense, however, and for the capacity building and/or development functions IEPA was established and mandated to render, the unavailability of information regarding the 'other' sectors of the economy within which her graduates were employed could mean that the IEPA needed to undertake more outreach activities with the view to knowing her clientele and their needs, if she was to remain relevant in meeting their 21st century needs and aspirations. Undertaking further outreach activities other than what IEPA was currently doing was needful, and perhaps may be the panacea in assisting IEPA to do periodic self-introspection to be able to identify gaps and/or lapses in her curricula and general modes of training and course delivery to bring these in line with the needs of her clientele.

What factors did employers consider in the job placement of IEPA graduates?

In relation to this research question, the IEPA graduates were asked to

identify the factor(s) that they thought informed their own placements in their respective work schedules by their employers. Figure 3 presents the quantitative findings to this question.

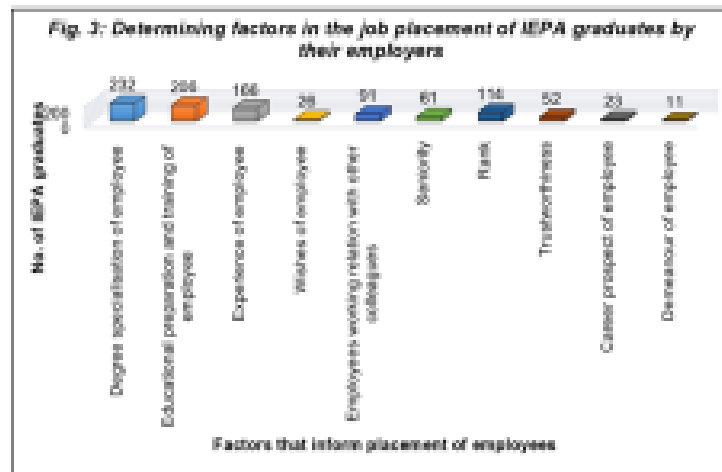


Figure 3: Factors employers considered in the job placement of IEPA graduates

The results, as presented in Figure 3, are significant as they help to make sense of the issues and factors employers gave general considerations to in deciding how employees were deployed. Thus, reading from Figure 3, respondents indicated that in determining their placement as employees, their employers first considered three key issues, namely: degree specialisation of employees; educational preparation and training of employees; and level of experience of employees. The next set of factors employers gave considerations to, according to the findings as indicated in Figure 3, and in order of priority include: rank of employees; employees' working relations with other colleagues; seniority; and trustworthiness of prospective employees. The rest of the factors, representing the least issues employers gave considerations to in deciding employee placement, include: wishes of employees; employees' career prospects and demeanour of prospective employees. Largely, these findings enlisted appeared consistent, in many respects, with the preponderance of available evidence from human resource development literature (Abdullahi, 2013; Abdollahi & Abdollahi, 2006; Armstrong, 2009; Chester & Beaudin, 1996; El-Ghalayini, 2017; Ogechukwu & Okoye, 2015; Rebore, 2007; World

Economic Forum, 2017; Wood & Payne 1998). The literature on human capital development theory, for instance, suggests that albeit employee seniority, wishes, demeanour and trustworthiness were defensible criteria in making placement decisions, it was advisable to consider them only after other credible variables such as educational preparation and training, certification, experience, working relationships and career prospects of employees have been given due consideration (Johnson, 2015; Olufemi & Adebola, 2012; Rebore, 2007; Saleem & Balakrishnan, 2015).

Having said that, the results appeared to have contradicted the findings of the baseline research of the nation-wide tracer study conducted in the Central Region in 2014 (Nudzor & Danso, 2015; Nudzor, 2016), and which served as a precursor to the ‘hard-nose’ research activity on which this current article was based. Among other things, the findings of the baseline study suggested that although employers in the Central Region were aware that educational preparation and training ought to take pre-eminence in determining the job placement of IEPA graduates, they prioritised such other factors as seniority, rank, wishes, and trustworthiness of prospective employees.

In respect of the semi-structured interviews conducted with representatives of organisations in which IEPA graduates were employed, and who for the purposes of our research were designated as ‘employers’, there was a lot of convergence with the quantitative findings presented in Figure 3. Relative to the research question in contention, the employers, in their respective interviews, appeared to have corroborated the responses of the IEPA graduate employees directly. This is seen in the fact that almost all of them identified the first three factors IEPA graduates prioritised as issues employers gave considerations to in the placement of prospective employees. This was evidenced in the words of one employer, for example:

We want people who have some knowledge in administration already. So preferably, if they come and say we have trained in educational administration, then they make the best people and we assume that theoretically, they know what to do or they have the background of what administration is. Therefore, we prefer them to people who haven't done any administration at all (Employer 2).

Another employer construed and summarised the issue of employee placement as hinging basically on the experiences prospective employees bring along with them to the job environment:

We want experienced persons. Experience is what matters very much in our job here (Employer 5).

While this employer did not say, neither did he/she imply that IEPA graduates were not experienced to be employed by his or her organisation, it could be deduced from the excerpt that graduates generally without requisite experiences were not considered for employment by this organisation. This insight is particularly helpful in the sense that it sets the criterion by which the organisation in question selected prospective employees for deployment.

In yet another interview encounter, an employer explained the criterion for the placement of prospective employees in his/her organisation to be around the professional training acquired by graduates. He/she was however quick to problematise the way by which potential employees have generally taken advantage of the second degree as a pre-requisite for employment in the organisation to pursue all manner of degrees that were not related to the teaching profession that the organisation specialised in. The interviewee implied further that in instances where second degrees were acquired by existing employees, for career progression purposes, the degrees did not get the recognition they deserve and the personnel did not get upgraded as a result. The interviewee's exact words are presented in the following excerpt:

We consider the degree specialisation of candidates before deploying them... However, it will marvel you to know that most of our teachers are going out to pursue master's degree and some programmes which are not even approved. They go and acquire those degrees but they do not get upgraded because the degrees are not related to their teaching work (Employer 4).

Clearly, the three examples cited herein serve largely to corroborate the findings derived through the self-administered questionnaires concerning the criteria employers used to determine the job placement of IEPA graduates. The findings to this research question

implied that employers of IEPA graduates resorted to the interplay of factors such as employees' development (i.e. degree specialisation), capacity (educational preparation and training) and know-how (i.e. level of experience) in determining the job placement of IEPA graduates which is in-line with the expectations of the human capital theory (HTC) underpinning this study. This therefore suggested that employers of IEPA graduates perhaps were adopting best practices in terms of their employees' job placement.

To what Extent did the Degree Specialisation of IEPA Graduates Inform the Placement Criteria of their Employers?

This question sought to find out the extent to which the respondents thought their degree specialisations served to inform the selection and placement criteria of their employers. Findings to this specific question are presented in Figure 4.

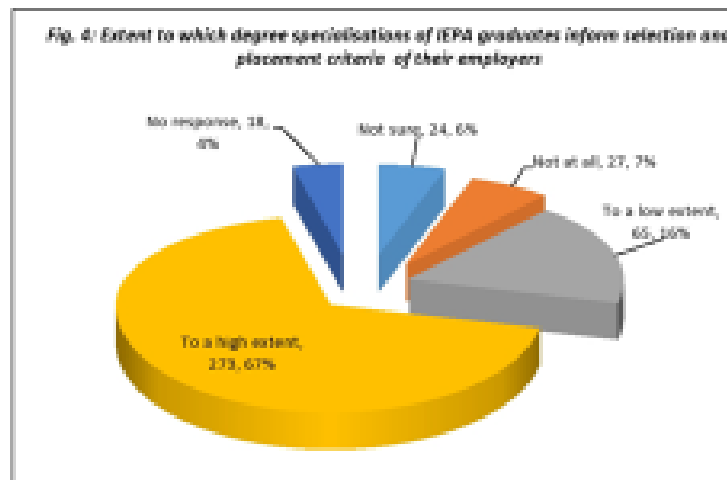


Figure 4: Extent to which the degree specialisation of IEPA graduates informed the placement criteria of employers

The findings from Figure 4 raise doubts about whether or not respondents genuinely had knowledge of the criteria used by their employers in selecting and placing employees at their respective schedules. From the figure, 4% (indicating 18 respondents) decided not to answer the question about the extent to which their degree specialisations had informed the selection and placement criteria of

their employers, 6% (representing 24 respondents) were unsure whether this was so, whilst 7% (representing 27 respondents) thought their degree specialisations did not inform their placement by their employers at all. The rest are 16% (representing 65 respondents) responding that their degree specialisations informed their selection and placement to a low extent whilst sixty-seven percent (67%, indicating 273 respondents) agreeing to the proposition that the degree specialisations of IEPA graduates indeed informed the selection and placement criteria of their employers to a large extent. In spite of the uncertainty surrounding whether or not respondents were privy to how employers placed and/or deployed their prospective employees in their respective schedules of work, Figure 4 and the findings it illustrates are, nevertheless, helpful for one reason. Essentially, the figure presents some background findings of a sort against which other findings in respect of the overarching research question could be measured for purposes of respondent consistency, confirmability, dependability and trustworthiness. In line with this reasoning, and for purposes of research triangulation, an item on the questionnaire deliberately interrogated whether or not respondents thought the professional training and/or qualifications they obtained from IEPA were aligned to their work schedules. The findings that emanated from the statistical analysis of data relative to this item on the questionnaire are presented in Figure 5.

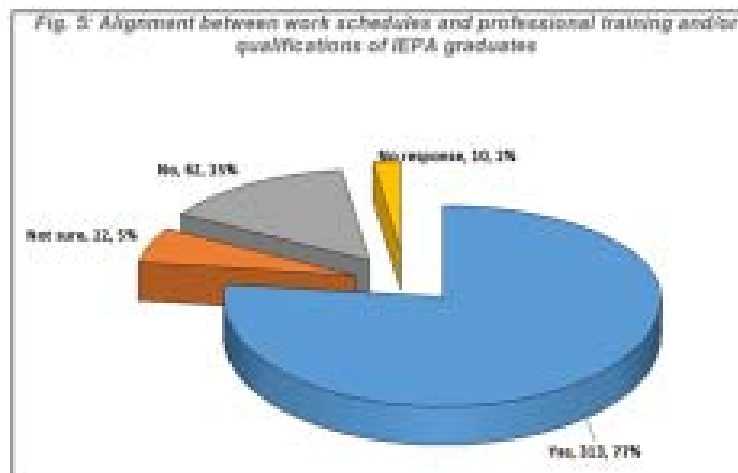


Figure 5: Alignment between professional training and/or qualifications of IEPA graduates and their work schedules

Clearly from Figure 5, 313(77%) of the respondents thought that their work schedules were in line with the professional training and qualifications they had received from IEPA whereas 62(15%) respondents thought this was not the case. Also, from the figure, 22(5%) respondents were not sure whether or not their work schedules were in line with the professional training and/or qualifications whilst 10(3%) of them did not provide answers to the question.

Thus, comparing insights in Figure 4 to those in Figure 5 makes an interesting observation. As the comparison would indicate, 77% of respondents (in Figure 5) agreed that their work schedules were in line with the professional training and/or qualifications they had received from IEPA while 67% of respondents (in Figure 4) thought that their degree specialisations were consistent with the selection and placement criteria of their employers to a high extent. Whilst this seeming contradiction in the findings is interesting, it is important to note that perhaps this may have been occasioned particularly by the introduction of 'to a low extent' as one of the options in Figure 4. When the 16% point for this option (i.e. to a low extent) in Figure 4 is taken to mean that respondents feel or see some form of alignment between their degree specialisations and selection and placement criteria of employers, and therefore added to the 67% for those respondents who agreed 'to a high extent' with the proposition that their work schedules were in line with the professional training and/or qualifications they had received from IEPA, the final outcome of 83% is just 6 percentage points higher the 77% indicated in Figure 5.

So while this article has examined factors determining the job placement of IEPA graduates in the Ghanaian labour market, the findings exemplify and reiterate the human capital development theory adopted as the theoretical resource for the article implicitly. As the framework illustrates in relation to the findings, organisational success results from the interplay of issues related particularly to the employees' capacity, development, know-how and deployment. What this means, or at least implies invariably in practice, is that attainment of organisational goals and objectives, in terms of employee outputs, cannot be achieved, maintained and/or enhanced by delineating employee placement or deployment from the four-variable equation. Seen in this light therefore, the human capital development framework adopted as a theoretical lens points essentially to key consideration for policy-makers and

employers seeking to enhance employee and organisational performance within countries and across the global economy.

Conclusions

This article has reported on an aspect of the nation-wide tracer study which examined how effectively IEPA graduates were placed and utilised in the Ghanaian labour market to enable them contribute their quota towards the developmental agenda of the country. Essentially, the current article has explored the determining variables employers gave considerations to in the placement of IEPA graduates in their respective places and schedules of work. This was undertaken against the backdrop of a dearth of information concerning how IEPA graduates were placed in the labour market to enable them contribute their quota towards Ghana's developmental agenda. In line with the general purpose of the article, the views of both employers of IEPA graduates and the graduates themselves were presented in juxtaposition and discussed to gain a better insight into the criteria that informed the job placement of IEPA graduates by their employers.

It is apparent from the findings of the study that overwhelming majority of IEPA graduate's employees were engaged in educational related establishments across all the levels of education in Ghana. In this respect, it is concluded that the IEPA could be viewed as fulfilling her mandate through the preparation of graduates for careers within the Ghanaian educational sector as a whole. What this implies, therefore, is that IEPA needs, as a matter of urgency, to intensify her outreach activities to ensure that she remains in constant touch with her clientele in order to understand their changing needs and aspirations so as to be able to help meet these demands continually. Against the backdrop of the findings enlisted in the article, it is also recommended that the IEPA intensifies her collaborative efforts with MOE and her agencies, especially GES, to, among other things, undertake research to generate empirical knowledge and research to inform educational policy and practice in Ghana; provide education and training aimed at improving planning, leadership and management capabilities of personnel in the education sector; and improve the operational efficiency of personnel within the GES and educational institutions in Ghana.

In line with the evidence that emanated from the findings to the

effect that the degree specialisation (development); educational preparation and training (capacity); and level of experience (know how) of IEPA graduates largely informed the placement criteria of employers, it is concluded that this is an indication that employers of IEPA graduates generally were being consistent, in many respects, with the best practices admonished by the human resource development literature regarding placement of employees. This finding also indicates that perhaps IEPA may be meeting the needs, aspirations and expectations of her clientele.

Also, the findings indicated that some graduates of IEPA were employed in non-education related sectors of the economy that were not disclosed. The unavailability of this information puts the onus on IEPA to intensify her outreach activities with the view to knowing all her clientele and their needs, if she is to remain relevant in meeting their 21st century needs and aspirations. Intensifying her outreach activities other than what IEPA is currently doing is needful, and perhaps may be the panacea in assisting IEPA to do periodic self-introspection to be able to identify gaps and/or lapses in her curricula and general modes of training and course delivery to bring these in line with the needs, aspirations and expectations of her clientele.

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Socio-economic Determinants of Academic Performance of Mature Students in Ghana: A Case Study of University of Ghana Entrance Examinations

ERIC OSEI-ASSIBEY & CYNTHIA ADU

Abstract

The purpose of the study is to investigate different socio-economic factors influencing the academic performance of 'mature applicants' in examinations for access into universities. Using University of Ghana as a case study, we collected bio and socio-economic characteristics data of 731 applicants after eight weeks of intensive access course in all the eleven University of Ghana Learning Centres across the country. Applying multivariate linear regressions data analyses technique and using applicants' performance in English, Mathematics and Logic as dependent variables, the study reports interesting findings. The findings indicate that applicants' prior educational level and sex are significant determinants of academic performance in all three courses. Relative to their male counterparts, the female applicants are found to perform significantly low with similar magnitude for all four performance indicators. Marital status is only found to significantly influence students' performance in English, with married students' overall performing significantly lower than their unmarried counterparts. The results also revealed that the longer the applicant has stayed out of school, the lower his or her performance in all three subjects. Applicants' motivation was also found to significantly predict academic performance in the access examinations. Students whose motivation was aligned to their work, that is for the purpose of obtaining promotion, securing a job, and/or change job, perform less than their counterparts who aimed at achieving personal interest or acquiring new knowledge. The findings have an important practical implication for designing an appropriate mature applicant access programme that suits applicants with diverse socio-economic backgrounds and which ensures better academic performance.

Introduction

One educational phenomenon currently growing in Ghana's tertiary education admission process is the mature applicants' window of admissions into universities in Ghana. Given that adult applicants seeking admissions into degree and diploma programmes are growing in numbers

and importance, many tertiary institutions based on National Accreditation Board guidelines on entry requirements, are conducting entrance examinations for potential adult learners who are 25 years and above. In a bid to provide broad access to tertiary education and to also increase their student enrolment figures, universities are increasingly becoming concerned about their inability to admit many more mature applicants who are seeking admissions into degree and diploma programmes because they do not meet the formal published admission requirements. There has been the argument that such mature applicants could be offered admission based on their maturity as well as knowledge, experience and skills obtained over their lifetime from their workplaces and family businesses. This, according to such viewpoint, more than compensates for deficiencies in the formal requirements. In any case, most of the universities, in an attempt to select applicants with the greatest chance of success, organise entrance course for a couple of weeks for interested applicants before they are made to sit entrance examinations.

The key question, however, in these entrance examinations is: which of the applicants is more likely to pass and gain admission into the university? In other words, what socio-economic factors will determine the academic performance of these mature applicants? There is multiplicity of factors that account for the disparities in academic performance of students at various levels of education, especially at the higher levels. These include individual and household characteristics such as gender, age, ethnicity, religious affiliations, marital status, socio-economic conditions, parental background, and motivation for higher learning and career. This relationship between academic performance and its determining factors has been studied in education literature, and this nexus has been emphasised by social scientists since the mid-1960s (Rothman, 2003; Caldas & Bankston, 2004; Wößmann, 2004; Chiu, 2007). According to Cassady and Johnson (2002), the cognitive factor has been argued to be the most consistent factor linked to declines in academic performance. This brings to the fore the issue of differences in educational attainments and their determinants.

Although there is a growing wealth of literature on the determinants of academic performance of students in academic institutions generally and adult or mature learners specifically, not many studies have been conducted on the socio-economic factors that influence mature

applicants' performance or who have the greatest chance of success in passing entrance examinations after undergoing a short access course programme. This current paper focuses on the Ghanaian perspective of demographic differences in academic achievements of mature applicants in entrance examinations. More specifically, the purpose of this study is to investigate different socio-economic factors influencing the academic performance of mature applicants in access examinations into tertiary education in Ghana. The study is particularly relevant as these applicants, many of whom have been out of school for a long time, are well advanced in age and are either working with enormous family responsibilities or remained unemployed with or without family responsibilities. How these factors, in addition to their own personal motivation, will impact on their performance is something that will be relevant in shaping policy of mature students' entry requirement and how access courses should be designed going forward.

The rest of the paper is structured as follows: Section Two presents the literature review while Section Three discusses methodology, econometric model specification and analysis of the preliminary findings using summary statistics. Section Four presents the regression results and discussions. The concluding remarks which include, summary of findings and policy implications of the study are presented in Section Five.

Literature Review

This section reviews a body of literature on determinants of academic performance of students in general and adult learners in particular. It examines the effects of demographic profile and socio-economic factors on academic performance of learners.

One of the most considered socioeconomic factors in academic performance is students' age and gender. According to Murphy and Carr (2007), the secondary education of girls is an important factor to poverty alleviation and economic sustainability. Comprehensive studies in the area of gender differences in academic performance have focused on mathematics, science, and verbal abilities (Halpern, 2000; Linver *et al.*, 2002). While few researches show a vast advantage for males over females in educational achievements at higher levels (Weis *et al.*, 2013; Eshetu, 2015), significant amount of studies have indicated that

the performance of female students in all major subjects outweighs that of their male counterparts (Alton-Lee & Prat, 2001; Wong *et al.*, 2002; Mullis *et al.*, 2003; Perkins *et al.*, 2004; Hartley & Sutton, 2014; Zainal *et al.*, 2014). Some studies also find this difference to be subject specific with the females putting up significantly better performance in reading subjects while their male counterparts have advantage in science and mathematics (Blosser, 1990; DeBaz, 1994).

Contrary to the studies that found significant gender differences in educational achievements, some studies have found no significance, revealing more similarities than differences in academic performance of male and female colleagues at higher education (Hedges & Newell, 1995; Meece & Jones, 1996; Coley, 2001; Ambrose & Egbon, 2011). Similarly, Hannover and Kessels (2011) found these unclear differences in gender to be evident in mathematics achievements. Machin and Pekkarinen (2008) have attributed the mixed findings on academic performance between men and women to be attributive to the juxtaposition of the higher variance of boys' achievement to that of their female counterparts.

Findings on prior studies on age have shown mixed results (Jense, 1982; Cullen, 2002). Some studies found evidence of older or matured students faring better academically than their younger classmates (Crosser, 1991; La Paro & Pianta, 2000), while others found no significant difference in academic achievements between the young and old colleagues (Dur, 1992; McEvoy, 1989; Frisby, 1991; Bitrus *et al.*, 2016). Individuals are argued to gain better understanding of what they learn as they age in education (Sturman, 2003; Ng & Feldman, 2008; Ogunkola, 2010). Watkins and Hattie (1985) in a US study found mature students to have effective learning approach and hence, produce better academic outcomes than their younger colleagues. Intuitively, an individuals' comprehension of knowledge as well as the stock of it increases over time. Through life long experience, older students are expected to have practical understanding of theoretical knowledge and excel better in education than their younger counterparts. On the contrary however, the absorption, articulative, and retention capacity of the younger ones is generally higher than their older colleagues.

Bitrus *et al.* (2016) examined the effect of age and marital status on academic performance of students of six Colleges of Education in North-Eastern Nigeria. The study employed a survey design to examine

the situation for a sample of 1,200 out of a total of 13,529 NCE students and found both variables to be insignificant in the academic performance of students. In a similar study in Nigeria, Ekundayo (2010) randomly sampled 367 education majors from two institutions and examined the influence of gender, marital status, and religious affiliation on academic achievements and revealed insignificant results for the three possible factors of academic performance. Other studies that found insignificant outcomes for marital status as a predictor of academic performance include Eyer (1993) and Wilson (2004).

Contrary to major findings on marital status and academic performance, Petrol (2010) found significant results for marital status and concluded that the academic performance of married students is significantly different from their unmarried counterparts. Park (2004) also found significant differences in the test scores between married and unmarried students at higher level education. In a study of the academic achievements of 240 Community College students in United States, Yess (2009) found marital status as a significant predictor in educational achievements. Proyrazi and Phillip (2006) also studied a sample of 149 international students of five universities in USA and found married students to record significantly higher performance relative to their unmarried colleagues. Female married medical students in Nigeria were found to put up poor performances with more re-sit examinations than their single female and male colleagues, and the differences in their performances were found to be statistically significant (Egwuala & Umeora, 2007).

On specific issues of factors affecting adult learner/mature student's academic performance, much of early work in this area have focused on the relationship between age and intelligence — investigating whether one's intelligence declines with age (Hassett 1983; Merriam *et al.*, 1993; Hallam (1996). According to Ndlovu and Moyo (2013) most of these studies were conducted in artificial settings, and timed educational tests were used to compare younger learners with older learners. Findings of these studies were that intelligence is not reduced through the aging process. For example, Hallam (1996) noted that the ability to comprehend new information and to think flexibly improves with age. Similar findings were made by Hassett (1983) who conducted an intelligence test using the Wechsler Adult Intelligence, by testing two very different sorts of abilities, the verbal and performance abilities of

the young and the old. The study reports that, where verbal portion measures competence with words and store of information, older people show little decline. The researchers concluded that overall decline in abilities is not great.

In an empirical study to determine the correlation of the factors affecting academic performance of adult learners in Zimbabwe, Ndlovu and Moyo (2013) found that attendance and academic self-concept have a strong positive correlation with performance. Learning styles and age were also found to affect performance while marital status and income did not significantly affect performance. Again, Vanslambrouck *et al.* (2017), using multivariate regression, studied adult learner characteristics as predictors of performance, satisfaction and intent-to-persist in online and blended environments and found that the motivation of learners influences all three outcomes. For both satisfaction and intent-to-persist, their results showed a positive relationship with controlled motivation and a negative relationship with autonomous motivation. The study also considered and included such background variables like age, gender, having children, prior diploma, employment status and current educational level in the regression, however only gender was found to significantly predict performance.

Methodology and Preliminary Data Analysis

The study employed various quantitative and statistical tools such as summary statistics, cross-tabulations and multiple regression techniques to analyse the effect of demographic characteristics and motivation of mature applicants on academic their performance in entrance examinations in English, Mathematics and Logic.

Multiple Regression Model Specification

Following studies by Hedges and Newell (1995) and Vanslambrouck *et al.* (2016), we specify a simple multiple regression analysis using OLS estimating techniques for the determinants of academic performance of mature students in three subjects namely, English, Mathematics and Logic. This is specified as:

$$Y_i = \beta_o + \beta_i X_i + \varepsilon_i$$

where y is the dependent variable measuring the average score obtained in English, Mathematics and Logic. The subscript i represents a specification for each score obtained in each of the three subjects (i.e., i = English, Mathematics and Logic scores). In this respect, four models were estimated. The variable X represents a vector of explanatory variables that have been identified in the extant literature. These variables include, age, sex, marital status, number of children, educational background, employment status, and the applicant's motivation for applying to get a degree.

Data Source and Characteristics of Surveyed Mature Students

The biographical data of surveyed students of the School of Continuing and Distance Education (SCDE) of College of Education, University of Ghana, together with the basic descriptive statistics (frequencies and percentages) as well as summary statistics (mean, standard deviation, minimum and maximum values) are presented where appropriate in Table TS.1, Table BS.1 and Table BC.2. Out of a total number of 856 mature applicants for the 2017 University of Ghana (UG) Access Course who sat for the entrance examinations, 757 completed the survey questionnaire. Out of the 757, a total of 731 questionnaires were found complete and deemed valid for analysis. Table TS.1 shows the sample distribution of mature applicants who sat for the UG Access Course Entrance examinations while Table BC.1 and Table BC.2 report the summary and descriptive statistics of the biographical data of the surveyed respondents.

Centre Distribution of Respondents

Majority of the respondents (that is those that took part in the 2017 UG Access Course for mature applicants) are centered in Accra and Tema, whilst relatively few are centered in Cape Coast and Ho. There is more or less even concentration of students in Bolgatanga and Koforidua as well as Kumasi and Tamale as presented in Table TS1. The table shows frequency and percent (%) distribution of total number of mature applicants who sat for the UG Access Course Entrance Examinations.

Table TS.1: Total Sample of Mature Applicants by Regional Centres

<i>Centre</i>	<i>Students who took the Exams</i>	
	<i>Number</i>	<i>Percent (%)</i>
Accra	359	49.11
Bolgatanga	31	4.24
Cape Coast	6	0.82
Koforidua	35	4.79
Kumasi	44	6.02
Sunyani	38	5.2
Takoradi	64	8.76
Tamale	47	6.43
Tema	79	10.81
Ho	7	0.96
Wa	21	2.87
Total	731	100

Source: 2017 UG mature applicants survey data.

Demographic Characteristics of Respondents

In the discussion, descriptive statistics and summaries are provided in relation to the total number of responses to a particular question on the biographical characteristics of the applicants. From the Table BC.2, it is evident that there are more males than females who registered for the 2017 Access Course with SCDE; 59.26% against 40.74% based on the total responses provided by the applicants. The average age of a student is 32.14 which confirms the purpose of the programme and the fact that applicants are mature and advanced in age. They are also shown to age 25 to 56 years. Table BC.1 shows summary statistics (Observations, mean, standard deviation, minimum, and maximum values) of student's age, number of children, and year of completion of highest education.

Table BC.1: Summary Statistics of Mature Applicants

Characteristics	Summary Statistics				
	Obs.	Mean	Std. Dev.	Minimum	Maximum
Age	709	32.14	6.29	25	56
Number of children	518	1.54	1.36	0	6
Year of completion of highest education	681	2006	7.14	1977	2017

Source: 2017 UG mature applicants survey data.

Shown by the cumulative percentages, approximately 88.69% are employed while the remaining 11.31% are unemployed. The employed constituted 32.55% government salaried workers, 69.10% private salaried worker, and 19.59% self-employed. Out of the total number who responded to the question on their occupation, 10.21% are not employed but looking for job while the remaining 1.1% are not looking for job though they are unemployed. Majority of the respondents (54.12%) are single and never married. This is followed by 40.66%, 2.61%, 1.92%, and 0.69% who are married, separated, divorced, and widowed respectively. One hundred and fifty-one (29.15%) out of the total 518 indicated that they have no children. Majority of the mature applicants have fewer children, showing 23.94% with one child, 21.43% with two children, and a few of them (0.58) having as many as six children. On average, each of the 367 respondents has approximately two children. The maximum and minimum numbers of children reported were six and one respectively and showing an average of two children per respondent.

Majority of the respondents are Christians dominated by the Charismatic/Protestants denomination. A few are Muslims and the least are traditionalists. All the 726 (100%) mature applicants responded “yes” to the question whether they have had any formal education. Implicitly, the mature applicants show some considerable level of formal education. The highest level of education of the 726 respondents ranges from SSS/SHS, Diploma/HND, Technical/Vocational, other, ‘O’/‘A’ level to JHS/JSS/Middle school. Evidently, majority of the mature applicants had senior secondary school education as their highest level of education. Also 718 out of the total 731 indicated their computer literacy skills. Majority of them are shown to have some ICT skills.

Also, responding to years of when they last left school, a vast majority left school in and around 2006 with a few leaving schools as far back as 1977, and the latest leaving in 2017. Impliedly, most of the mature students, on average, have been out of school for nearly eleven (11) years.

Table BC.2: Background Characteristics of Mature Applicants

<i>Characteristic</i>	<i>Number</i>	<i>Percent (%)</i>
<i>Sex</i>		
Male	432	59.26
Female	297	40.74
Total	729	100
<i>Employment Status</i>		
Salaried worker-Gov't	236	32.55
Salaried worker-Private	265	36.55
Self-employed	142	19.59
Not employed, looking for work	74	10.21
Not employed, Not looking for work	8	1.1
Total	725	100
<i>Marital Status</i>		
Single, never married	394	54.12
Married	296	40.66
Divorced	14	1.92
Separated	19	2.61
Widowed	5	0.69
Total	728	100
<i>Religion</i>		
Catholic	99	13.73
Protestant/Orthodox	102	14.15
Charismatic/Pentecostal	366	50.76
Islam	97	13.45
Traditional	3	0.42
Other	54	7.49
Total	721	100

Table BC.2 (cont'd)

<i>Characteristic</i>	<i>Number</i>	<i>Percent (%)</i>
<i>Have formal education</i>		
Yes	726	100
No	0	0
Total	726	100
<i>Highest Level of Formal Education</i>		
JHS/ JSS/ Middle school	21	2.89
SSS/SHS	393	54.13
'O' level/'A' level	38	5.23
Technical/Vocational/Training school	46	6.34
Diploma/HND	189	26.03
Other	39	5.37
Total	726	100
<i>Computer Literacy</i>		
Yes	593	82.59
No	125	17.41
Total	718	100

Source: 2017 UG mature applicants survey data.

Motivation for Applying to UG Access Course

People are motivated differently in their educational decision making. While some are job-related including motivation to attain pay upgrade, relatively decent jobs, promotion and competence, others are enthused by the need for personal growth and development in knowledge acquisition and enhanced confidence. A total of 717 of the surveyed students responded to the question on motivation for pursuing higher education as presented in Table MV.1, out of which acquisition of new knowledge formed the basis for 54.11% (majority) of them. Another 27.2% needed to achieve a personal interest or goal, 8.51% for promotion, 5.58% to get a job, 2.79% to change jobs, while the remaining 1.81% chose other reasons not stated. This suggests that the main reason for seeking a higher education is not job-related, but rather the need for personal development through knowledge acquisition.

Table MV.1: Motivation for Seeking further Education

<i>Motivation</i>	<i>Number</i>	<i>Percent (%)</i>
For promotion	61	8.51
Acquire new knowledge	388	54.11
To change job	20	2.79
To get a job	40	5.58
To achieve a personal interest/goal	195	27.2
Other	13	1.81
Total	717	100

Source: 2017 UG mature applicants survey data.

Students' Performance of the UG Access Course Entrance Exams

Table SP.1 shows the summary statistics on the performance of students on the UG Access Course and it presents the total number of students who took the entrance examinations for the three courses, the mean marks obtained, the standard deviation, as well as the lowest and highest marks obtained. The average mark obtained in English test was 42.6%, with the lowest and highest marks being 11% and 79% respectively. The highest mark (90%) from all three courses was obtained in Logic. This is followed by quantitative methods which recorded a maximum mark of 80%. The lowest mark was recorded in English (11%), followed by logic (13%). The mean marks obtained in the assessment for the three courses show 42.66%, 47.98%, and 45.95% for English, Mathematics, and Logic respectively. Impliedly, students obtained higher marks in Mathematics relative to Logic and English. The pass mark for the entrance exams was pegged at 40%. Marks below 40% are categorised as 'fail', while a mark of 40% and above is categorised as 'pass.'

SP.1: Marks Obtained in 2017 UG Access Course Exams

<i>Variable</i>	<i>Obs (#)</i>	<i>Mean (%)</i>	<i>Std. Dev. (%)</i>	<i>Minimum (%)</i>	<i>Maximum (%)</i>
English	726	42.6625	10.812	11	79
Quantitative method	728	47.9753	10.2065	18	80
Logic	727	45.9532	13.4184	13	90
Average Mark	731	45.2836	9.19942	21	78

Source: Authors' estimation.

Students Performance by Centre

Individual characteristics are categorised into Centres to remove outlying categories in order to produce a true reflection of the effect of individual characteristics on academic performance. The variables that were re-categorised included marital status (married and unmarried), religion (Christian and Muslim), educational level (basic, secondary, and tertiary), and motivation (job-related and personal interest and knowledge acquisition).

Appendix Table SP.2 presents students' performance in the UG Access Course Examinations by their Centre of registration based on the fail and pass criteria. It shows results for all three examinable courses (English, Mathematics and Logic) including the average marks obtained by each student. A mark less than 40% was recorded as fail and above 40% was recorded as pass. The students who sat for the English, Mathematics and the Logic examinations totaled 726, 728, and 727 respectively. There were more pass marks recorded than fail with a higher proportion of students (81%) passing in Mathematics compared to 69% and 62% respectively for Logic and English. In all, 731 students took the UG Access Course examinations as indicated by the total number of students under the average performance. Out of this number, approximately 73% obtained pass marks for all the three courses on average.

At the Centre level, as indicated in Appendix Table SP.2, a greater majority (68.8%) of students in Accra recorded a pass in English which is higher than the number of students passing in each of the other Centres. This is followed by Cape Coast (67%) and Tema (62%). The Centres with the highest failure in English were recorded in Bolgatanga (68%), Ho (75%), and Wa (57%).

Regarding Mathematics, the results show that all Centres reported higher pass marks than fail. Cape Coast reported the highest with 100% pass followed by Accra and Ho with 86% passes each, while Koforidua had 83%, Kumasi 82%, and Wa 81%, among other centres.

Results for Logic show that apart from Bolgatanga and Wa which recorded higher proportions of fail, all other Centres had majority of their students obtaining pass marks. Relative to other Centres, Accra and Koforidua had the highest proportion (74%) of their students obtaining pass marks. Sunyani and Tema followed with 69% apiece.

Results for the average marks obtained for the three courses indicate that Cape Coast, Accra, and Koforidua dominated with 100%, 88% and 80% respectively of their students obtaining pass marks, whilst a higher proportion (52%, 51% and 52%) of students from the Bolgatanga, Tamale and Wa Centres were unable to secure pass marks compared to those who passed.

Student Performance by Demographic Characteristics

The performance of the mature students by their individual characteristics show that the males dominated in the proportion of passes obtained across the various courses as compared to their female counterparts (see Appendix Table SP.3). The proportion of male who passed the English, Mathematics, and Logic courses were approximately 64%, 83%, and 74% respectively relative to the corresponding 57%, 78%, and 62% for the female counterparts. While a higher proportion of females failed English and Mathematics, they reported a lower proportion of fail for Logic, relative to their male counterparts. On average however, the male dominated, with 76% of them obtaining the pass mark, while their female counterparts reported a higher proportion of fail.

Also students in the lower age bracket reported a higher proportion of passes relative to those in the higher age bracket. This is reflective in the average performance where the youth reported more passes (76%) than their older counterparts (65%). For highest educational level, mature students who have tertiary as highest level of education obtained higher pass and lower fail marks than their secondary and basic school certificate holders. For the various courses also, holders of tertiary education certificates had the highest proportion of passes for English and Logic, followed by the secondary certificate holders. However, those with secondary school certificate performed better in Mathematics than their counterparts with tertiary certificate.

Compared to the unmarried students, lesser proportion of the married students obtained pass marks while a higher proportion obtained fail in all three course areas. Students with more than two children were also found to have put up lower performance relative to their counterparts who have at most two children, with those having no or at most 2 children showing even much greater performance. However,

the pass-fail statistics for English and Logic are marginal showing at most one percentage point difference.

Similarly, the students who obtained the highest level of education and completed education about a decade ago dominated with high proportions of passes for all three courses and also for average performance relative to their counterparts who completed more than a decade ago, and who also reported high proportion of passes across the course categories. Again, the difference in the proportion of fails and passes between those who completed a decade ago and their counterparts is very marginal for English and Logic, showing a difference of 0.2% at most.

Estimation Results and Discussions of Applicant's Demographic Characteristics and Performance

Table BD.1 shows the regression output for the determining factors of mature applicants' performance, with the applicants' performance regressed on their demographic characteristics and motivation for further studies. The model fitting information results all show the equations are well-specified and appropriate whereas the estimated results are generally consistent with the academic performance determinant literature.

There are four different regression results for English, Mathematics, Logic and average performance. All four models are shown to be statistically significant at 1% with Probability of F-Statistics of 0.0008 at most. The adjusted R-Squared is an indication that approximately 9%, 4%, 5%, and 9% variances in marks obtained for English, Quantitative Methods, Logic, and average marks respectively are explained by the student characteristics under consideration. This is more accounted for by the students' specific socio-economic characteristics than in other subjects. In general, less than 10% of the variations in student performance (marks obtained) is accounted for by sex, age, marital status, religion, year of completion of recent education, number of children, motivation for further study, and IT knowledge. The implication is that there are other omitted demographic or socio-economic factors (Tomul & Polat, 2013) like the occupation of students and that of parents, education of parents, and cognitive factors, among others, that could also account for their performance. Tomul and Polat

(2013) found other socio-economic characteristics like type of higher education, various educational support, family location, parents' education, fathers' occupation, and number of siblings to significantly influence students' academic achievement.

Gender is shown to be a significant determinant of student performance in all three courses as well as the general average performance of mature students. Relative to their male counterparts, the female students are found to perform significantly low with similar magnitude for all four performance indicators. This finding is consistent with studies such as Weis *et al.* (2013) and Eshetu (2015) which also found that male students tend to perform better than their female counterparts in educational achievements at higher levels. Marital status is only found to significantly influence students' performance in English and more so at a less significant level of 10%. Intuitively, married students performed significantly lower than their unmarried counterparts. Although this finding is consistent with a vast majority of studies on marital status and academic performance which found no or weak relationship between the two, it is in contrast with studies such as Proyrazi and Phillip (2006) and Bitrus *et al.* (2016) which found married students to record significantly higher performance relative to their unmarried colleagues.

The results for the education variable indicate that students' performance increases with their level of education. Students with tertiary level of education are found to do better on all subject areas relative to their counterparts with basic level education. The year of completion of most recent formal education which is an indication of how long an applicant has stayed out of formal education was found to be significant for English and Logic as well as for average or overall performance. Unsurprisingly, we found that the longer the applicant has been out of school, the worse is his or her average performance in all the three subjects, especially in English and Logic.

Although this finding is inconsistent with the extant literature which concludes that intelligence does not decline with age (Merriam *et al.*, 1993; Hallam 1996; Ndlovu & Moyo, 2013), it appears it matters when you have been out of school for too long.

Students whose motivation was aligned to their work, that is for the purpose of obtaining promotion, securing a job, and/or change jobs are found to put up less performance in all subject areas relative to

their counterparts who aimed at achieving personal interest or acquiring new knowledge. Similarly, students with no IT skills did not perform as better as their colleagues with adequate IT knowledge or skills. Students with IT skills performed significantly higher in English, Mathematics, on the average, than their counterparts who lack computer skills.

Table BD.1: Background Determinants of Student Performance

Characteristics	Performance Indicators			
	(1) English	(2) Quantitative Methods	(3) Logic	(4) Average Performance
Sex:				
<i>Female</i>	-2.5251**	-2.0228**	-2.1275*	-2.2310***
Age	-0.0877	-0.1026	-0.0109	-0.0884
Marital status:				
<i>Married</i>	-2.4042*	-1.0453	-1.2726	-1.2429
Religion:				
<i>Christian</i>	1.2181	2.3898**	1.0993	2.0185**
Educational level:				
<i>Secondary</i>	6.6169**	6.7324***	4.2891	5.4942**
<i>Tertiary</i>	10.2970***	6.4014**	8.2311**	7.9798***
Year of completion	-3.8732***	0.3817	-4.2954***	-2.8106***
Number of children	0.5275	-0.1631	-0.1447	0.0185
Motivation:				
<i>Job related</i>	-3.7901***	-2.2071**	-3.8094***	-2.9157***
ICT knowledge:				
<i>No IT skill</i>	-3.4987***	-2.2514*	-2.4965	-3.1901***
Constant	41.5503***	45.0639***	44.2253***	44.0913***
Number of Observations	460	460	461	463
Prob. (F-Statistic)	0.0000	0.0004	0.0008	0.0000
R-Squared	0.1085	0.0688	0.0646	0.1124
Adjusted R-Squared	0.0886	0.0480	0.0438	0.0927

Source: Authors' estimation.

NB: *, **, & *** represents 10, 5, & 1 percent significance respectively

Concluding Remarks

The study has sought to investigate different factors influencing the academic performance of mature applicants in access examinations into tertiary education in Ghana, using University of Ghana's mature applicants programme as a case study. After eight weeks of intensive access course in all the eleven University of Ghana Learning Centres across the country, biographic and socio-economic characteristics data of 731 applicants were collected.

The marks obtained by the mature applicants in the 2017 UG Access Course entrance examinations indicate that mature students are more comfortable with and performs well in calculation and logical tests than in English. This implies that they are more experiential in knowledge, good with calculations and numbers than in reading subjects. With a mean mark of 45.29% for the three courses altogether, the mature students show good performance on average and for all three courses.

The male applicants, the youth, the highly educated, the unmarried, those with two or less children, and those who finished school less than a decade ago put up a better performance than their other counterparts. All these follow the normal expectation in any formal academic endeavour. The youth, who often have less responsibilities than adults often have the neurons and the ability to absorb and also articulate more than the adults or aged as expected in a normal learning life, although the literature suggests performance does not reduce with the ageing process. Evidently, the higher the academic status of individuals, the higher their performance as compared to their counterparts with a lower academic status, all things being equal. Married applicants and those with greater number of children are deemed to have other responsibilities and commitments outside the normal classroom activities that tend to overburden them, hence, reducing their performance propensity relative to the unmarried and those with fewer or no children.

The average performance of mature applicants showed the significance of sex, religion, education, year of stay out of formal education, motivation for learning, and computer knowledge or skill in academic performance. There is the need to further promote female education through access programmes and ensure that women are academically empowered enough to compete favourably with their male counterparts in all academic and related endeavours.

Universities designing mature access course programmes need to take into account the different socio-economic characteristics of the applicants, especially designing programmes that suit workers, working parents and those who have been out of school for a long time. The Universities should also ensure that basic computer knowledge and/or skills are incorporated in their access course programmes. This will ensure that students have some basic computer knowledge which is very instrumental in the academic and corporate environment.

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Appendices

Table SP-2: Students' Performance by Centre

Exams Outcome	Centre																		Total					
	Accra		Bolgatanga		Cape Coast		Koforidua		Kumasi		Sunyani		Takoradi		Tamale		Tena			Ho		Wa		
	N	Rol. %	N	Rol. %	N	Rol. %	N	Rol. %	N	Rol. %	N	Rol. %	N	Rol. %	N	Rol. %	N	Rol. %		N	Rol. %	N	Rol. %	
Performance obtained for English																								
Pass	247	68.8	10	32.3	4	66.7	23	65.7	24	55.8	21	56.8	31	50.0	24	51.1	48	61.5	3	42.9	9	42.9	444	61.2
Fail	112	31.2	21	67.7	2	33.3	12	34.3	19	44.2	16	43.2	31	50.0	23	48.9	30	38.5	4	57.1	12	57.1	282	38.8
Total	359	100	31	100	6	100	35	100	43	100	37	100	62	100	47	100	78	100	7	100	21	100	726	100
Performance obtained for Mathematics																								
Pass	308	85.8	24	77.4	6	100.0	29	82.9	36	81.8	28	75.7	48	75.0	31	67.4	57	73.1	6	85.7	17	81.0	590	81.0
Fail	51	14.2	7	22.6	0	0.0	6	17.1	8	18.2	9	24.3	16	25.0	15	32.6	21	26.9	1	14.3	4	19.0	138	19.0
Total	359	100	31	100	6	100	35	100	44	100	37	100	64	100	46	100	78	100	7	100	21	100	728	100
Performance obtained for Logic																								
Pass	263	73.5	14	45.2	4	66.7	25	73.5	32	72.7	26	68.4	39	60.9	29	64.4	54	68.4	4	57.1	10	47.6	500	68.8
Fail	95	26.5	17	54.8	2	33.3	9	26.5	12	27.3	12	31.6	25	39.1	16	35.6	25	31.6	3	42.9	11	52.4	227	31.2
Total	358	100	31	100	6	100	34	100	44	100	38	100	64	100	45	100	79	100	7	100	21	100	727	100.0
Average Performance																								
Pass	288	80.2	15	48.4	6	100.0	28	80.0	35	79.5	22	57.9	41	64.1	23	48.9	58	73.4	5	71.4	10	47.6	531	72.6
Fail	71	19.8	16	51.6	0	0.0	7	20.0	9	20.5	16	42.1	23	35.9	24	51.1	21	26.6	2	28.6	11	52.4	200	27.4
Total	359	100	31	100	6	100	35	100	44	100	38	100	64	100	47	100	79	100	7	100	21	100	731	100

Table SP.3: Students' Performance by Background Characteristics

Characteristics	English						Quantitative Methods						Logic						Average Marks					
	Fail		Pass		Total		Fail		Pass		Total		Fail		Pass		Total		Fail		Pass		Total	
	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %	N	Row %
Sex of respondents																								
Male	155	36.1	274	63.9	429	100	73	16.9	358	83.1	431	100	112	26.1	317	73.9	429	100	105	24.3	327	75.7	432	100
Female	126	42.7	169	57.3	295	100	65	22.0	230	78.0	295	100	114	38.5	182	61.5	296	100	94	31.6	203	68.4	297	100
Total	281	38.8	443	61.2	724	100	138	19.0	588	81.0	726	100	226	31.2	499	68.8	725	100	199	27.3	530	72.7	729	100
Age of Respondents																								
Youth	192	37.2	324	62.8	516	100	89	17.2	428	82.8	517	100	159	30.8	357	69.2	516	100	125	24.1	394	75.9	519	100
Adult	79	42.0	109	58.0	188	100	42	22.2	147	77.8	189	100	62	32.8	127	67.2	189	100	67	35.3	123	64.7	190	100
Total	271	38.5	433	61.5	704	100	131	18.6	575	81.4	706	100	221	31.3	484	68.7	705	100	192	27.1	517	72.9	709	100
Educational level of respondents																								
Basic	13	61.9	8	38.1	21	100	9	42.9	12	57.1	21	100	11	52.4	10	47.6	21	100	10	47.6	11	52.4	21	100
Secondary	189	40.0	284	60.0	473	100	85	17.9	391	82.1	476	100	148	31.2	327	68.8	475	100	129	27.0	348	73.0	477	100
Tertiary	78	34.4	149	65.6	227	100	45	19.0	183	81.0	226	100	66	29.2	160	70.8	226	100	59	25.9	169	74.1	228	100
Total	280	38.8	441	61.2	721	100	137	18.9	586	81.1	723	100	225	31.2	497	68.8	722	100	198	27.3	528	72.7	726	100
Marital status of respondents																								
Not married	153	35.6	277	64.4	430	100	75	17.5	354	82.5	429	100	132	30.8	297	69.2	429	100	110	25.5	322	74.5	432	100
Married	127	43.3	166	56.7	293	100	62	20.9	234	79.1	296	100	93	31.5	202	68.5	295	100	88	29.7	208	70.3	296	100
Total	280	38.7	443	61.3	723	100	137	18.9	588	81.1	725	100	225	31.1	499	68.9	724	100	198	27.2	530	72.8	728	100
Number of children of respondents																								
Maximum of 2 children	158	41.1	226	58.9	384	100	75	19.6	308	80.4	383	100	131	34.0	254	66.0	385	100	113	29.3	273	70.7	386	100
More than 2 children	54	41.5	76	58.5	130	100	31	23.5	101	76.5	132	100	46	35.1	85	64.9	131	100	44	33.3	88	66.7	132	100
Total	212	41.2	302	58.8	514	100	106	20.6	409	79.4	515	100	177	34.3	339	65.7	516	100	157	30.3	361	69.7	518	100
Year respondent completed highest level of education acquired																								
More than a decade ago	118	38.8	186	61.2	304	100	64	20.9	242	79.1	306	100	94	30.8	211	69.2	305	100	90	29.4	216	70.6	306	100
A decade ago	144	38.6	229	61.4	373	100	61	16.4	311	83.6	372	100	114	30.6	258	69.4	372	100	92	24.5	283	75.5	375	100
Total	262	38.7	415	61.3	677	100	125	18.4	553	81.6	678	100	208	30.7	469	69.3	677	100	182	26.7	499	73.3	681	100

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Articles must be submitted as MSWord documents; each should contain the name, professional title/institution (if any), and complete contact information for each author. Articles should not exceed 5000 words in length and should be double-spaced (including endnotes, reference and appendix) on A4 paper, one sided only. Pages should be numbered (bottom right corner).

Abstract

Each article should be accompanied by an abstract of not more than 250 words.

Notes

Notes explaining points made in the text should be indicated by numbering within the text and explained at the end of the main article before the reference list.

References

All works consulted should be listed at the end of each article under the headline REFERENCES. Authors should be listed alphabetically in the following order: surname, initials, year of publication, title of the article, title of the journal or book (in italics), and publishing house.

Tables, Figures and Abbreviations

Tables and figures (where provided) must have precise titles relevant to the contents.

Review Process

Manuscripts are subjected to a blind review process.

Notes on Contributors

Contributors are to provide a short profile of themselves. This should be not more than 50 words.

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