CHALLENGES OF THE 21ST CENTURY
GHANAIAN UNIVERSITIES

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ABSTRACT
After going through a period of higher educational reforms, Ghanaian public Universities are now being challenged to determine their future survival. Understanding the challenges facing the Universities is one step forward in the development of the right strategic decisions. These challenges, which include Revenue diversification and Institutional Autonomy, Information and Communication Technology, Changing Student Mix, Quality Enhancement and Relevance, Administrative and Management Structures and Processes, Equity and Access to Higher Education and Networking and Partnership Development, were analysed from the perspectives of the KNUST. The analysis revealed policy options that could be formulated to address these challenges for the sustainability of Universities in the 21st Century Ghana. The need for institutional transformation to be able to confront and manage the challenges has been recognised. It is therefore recommended that Ghanaian Universities could task the relevant units within the various institutions to conduct studies that would enable them monitor and advise management on measures to tackle the various challenges.

Keywords: Challenges, Transformation, ICT, University Management

INTRODUCTION
After a decade of educational reforms, higher educational institutions in Ghana, particularly the Universities have entered the 21st Century with changing views towards institutional management and the challenges facing them. This may be attributed to the changing attitudes and interest of the major stakeholders. Under the National Institutional Renewal Programme (NIRP), which is itself a reform initiative, all public sector institutions including the Universities are expected to change their orientation to improve public sector management as a whole. To further deepen the gains of the tertiary educational reform programme, NIRP initiated a programme for the partial commercialisation of the University sub-sector in order to empower the institutions to be able to generate at least 30% of their financial requirements.

In the short term the Universities would be influenced by the legacy of nearly a decade of exploration for sustainable sources of income that includes a variety of business operations and cost recovery measures. Further more, the immediate and unveiling opportunities of the 21st century such as the Information and Communication Technology (ICT) and the subsequent globalisation of the knowledge economy, pose great chal-
Challenges and opportunities for Ghanaian Universities. Some of these challenges may be applicable to many Universities as indicated in Kinkam (2001).

Justification
The importance of a critical analysis of the challenges that Ghanaian higher educational institutions in the 21st Century are likely to face cannot be over emphasised. Such analyses provide very important guidelines for institutional transformation, as the need for continuous re-adjustment of visions, missions, objectives and strategies remains obvious (Amonoo-Neize, 1998). These critical analyses provide opportunities for stakeholders, including students, governments, development partners and investors in the sector to understand the issues involved and to appreciate the outcomes of whatever strategies and actions that are being considered. For the relatively young area of higher education research in Ghana, many hypotheses could emerge from these analyses for verification that will ultimately contribute to knowledge.

The Main Areas
The objective of this paper is to examine the challenges in the Ghanaian context. These challenges are organised and analysed along themes which are however not necessarily mutually exclusive. The themes are Revenue diversification and Institutional Autonomy, Information and Communication Technology (ICT), Changing Student Mix, Quality Enhancement and Relevance, Administrative and Management Structures and Processes, Equity and Access to Higher Education and Networking and Partnership Development. Although much of the analysis is qualitative some supplementary quantitative data have been used. The data are however drawn extensively from the Kwame Nkrumah University of Science and Technology.

Revenue Diversification and Institutional Autonomy
Since the last decade the key issue has been the financial crisis that institutions face. Due to a continuous decline of the national economy, the real value of Government subvention or funding for the Universities over the years had fallen below levels required to sustain the institutions. According to the Government’s programme of institutional renewal, public funding of the Universities was targeted at 70% of institutional requirements with the expectation that the remaining 30% would be generated by the institutions themselves. Whilst government is unable to meet even 50% of institutional requirements, the universities are also unable to generate even one half of their expected target of 30%. Consequently the margin of funding gap now ranges from 30% to 40%. The urgency of the need for higher educational institutions to diversify sources of income in the 21st Century has become even more critical since government funding for their needs continues to fall below the required levels. Many writers including Bar (1993), Biervliet (1995), Blair (1992), Davies (1997) Ziederman and Albrecht (1995) have analysed the advantages and implications of diversified sources of income for university management. Many advantages are expected from the fact that Universities would be able to solve their financial crisis through diversified sources. The implications however include the fact that the quality of the core business of universities could be sacrificed in the search for diversified sources of income. Diversification of income sources also has an implication for University management since it may require management adopting entrepreneurial characteristics that may lead to drastic restructuring of the university system.

In response to this challenge, the institutions are now venturing into areas that were hitherto inconceivable. One such area is the gradual institutionalisation of fee paying in different forms for Ghanaian students. Since government has given the institutions the power to retain revenues generated including student fees, many departments now have some financial resources to supplement government funding. With these measures
the institutions are now beginning to realise what they can do without waiting for government support. Thus the autonomy that had been limited to academic activities is gradually widening to include some financial decisions.

The institutions are however aware that income from such sources are yet insignificant and are not likely to be allowed to rise appreciably. Meanwhile what the institutions are already experiencing is that, this kind of revenue generation through fees implies multiple responsibilities of accounting for financial resources. Both students and government are demanding accountability for their financial contributions towards the management of Universities. The implication is that as the proportion of fees in university budgets grows, students are likely to become more assertive in the financial aspects of institutional management.

**Information and Communication Technology Development**

The development of information and communication technology (ICT) and its tendency to promote the globalisation of knowledge poses several challenges to higher educational institutions in Ghana. For academia in particular the challenge will be how to sort out relevant information in their attempts to take advantage of the explosion of knowledge through the Internet whilst remaining unique.

However the cost of this technology is such that many institutions are likely to be isolated due to financial constraints. Institutional leaders who are unable to devise means of providing the appropriate environments for their constituents to take advantage of this globalisation of knowledge through the use of the Internet should be prepared to face the threat of isolation and the pressure of demand for ICT. Others may be forced to provide such infrastructure at high cost unless they can secure some assistance from donors. The University of Ghana(UG) and the Kwame Nkrumah University of Science and Technology (KNUST) have both tried to take advantage of such donor support to deploy ICT especially the Internet at the various campuses but the experience so far with this strategy is its unsustainable nature. There is the need here for institutions to team up and negotiate with Government for the development of the necessary infrastructure so as to guarantee cost-effectiveness. In the meantime the service is being provided in bits and pieces through individual institutional efforts and in an uncoordinated manner.

In 2001, the KNUST took advantage of a Hewlett Packade Digital Village project in collaboration with Ghana Telecom to lay an approximately 20-kilometre length of fibre optic cable backbone for the deployment of the Internet within the University campus. However prohibitive bandwidth subscription rates and prices of other hardware are hampering full deployment of the Internet service to all students and staff of the University. The other Universities are equally facing such daunting challenges in the deployment of ICT. In the absence of a push to collaborate from the national level, individual institutions will continue to make their own efforts with little success and at great cost.

The implication of the deployment of ICT for the university or academic community is that they will have to face up to the challenge of responding to the need for new ways of teaching, learning and researching to satisfy the changing needs and remain relevant. For instance university lecturers will have to take advantage of the new technology to adopt new ways of imparting knowledge. Inter-disciplinary research and teaching with participants extending beyond institutional boundaries to national or even international boundaries have emerged as challenges with opportunities that the institutions can not afford to miss. Since the technology enhances the accessibility to information, the challenge will then be selectivity and the creation of niches in order to ensure relevance to national/local set-
tings. Some of these niches already exist and are easily identified through the number of subscriptions. The KNUST in particular has a number of unique programmes in the country such as pharmacy, engineering, architecture etc that are highly subscribed and could be termed as niches that could be strengthened.

The Changing Ghanaian Student Mix
It has been observed that more and more Ghanaian students travel overseas during the semester holidays and return to continue their studies. The diplomatic communities in Ghana acknowledge that this characteristic appears quite unique at least in sub-Saharan Africa. According to KNUST records over 25% of the entire student population (i.e. 5,000) applied to the various embassies for travel visas to the Western World in 2003 to work during the holidays. A sizable number of these students ultimately travelled overseas during the end of semester holidays and returned to continue their studies. With this foreign (mainly western or industrialised) exposure in addition to the opportunities available through the use of the Internet, it is naturally expected that their attitudes and perceptions may change. Many academic staff claim that a growing number of students show more concern for their holiday travel and work abroad than their studies.

Also the proportion of foreign students from Africa, Europe and America is increasing because the universities see them as a good source of revenue. The University of Ghana and the KNUST had targeted foreign student participation of ten (10) percent. The KNUST has embarked upon a vigorous campaign drive to attract more foreign students. This trend increases the multicultural background of the student population. This is likely to produce varied needs and expectations that could influence the teaching and learning environment in higher education. University management and academia in general need to monitor the effects of these exposures in order to be able to minimise any threats and dangers on the one hand and also maximise the benefits.

Quality Enhancement and Relevance
The challenge of maintaining high levels of quality and relevance is becoming more urgent than before as the universities continue to grow in terms of student population. In spite of the phenomenon of globalisation the universities seek the need for their programmes and research to remain relevant to national and sub-regional development needs. This poses a challenge of striving to be unique and relevant.

For both economic and political reasons government may not allow the full implementation of cost recovery through fees to make it possible for the universities to improve quality and ensure relevance of programmes. On the other hand as long as students share the cost of their education through some fees (no matter how limited) they will demand accountability in terms of financial administration and quality and relevance of educational delivery. Also as more graduates find fewer jobs, they will tend to attribute part of the blame to the irrelevance of their programmes of study. In the present situation where large funding gaps persist whilst student numbers continue to soar, the capacity of universities to produce good quality graduates to meet the needs of a changing labour market will remain limited. Meanwhile the demands for quality and relevant programmes will become even more complex because rapid technological advancement demand constant review of academic programmes to meet the needs of young undergraduates and continuing education for the working class.

It is a fact that in times of economic hardships as in the Ghanaian case, facilities and funding for research are limited and in most cases absent. In areas where foreign partners and donors are filling funding gaps for research, the tendency is for their interest to supersede the national or local interest. In fact many research proposals are designed to meet donor interest just to secure the
much needed funding. Under such circumstances the real application of research results to local needs in teaching and the subsequent utilisation of research results in policy-formulation become a matter of chance.

Due to lack of funding and limited attractive conditions of work, higher educational institutions are unable to attract young lecturers. The limited funding also limits their capability to upgrade the skills of university staff to take advantage of new technologies. This consequently limits the opportunities for the staff to be innovative and creative in the identification of strategies to cope with limited funding and increased student populations to turn out products for the increasingly competitive market.

Academic staff will have to accept student evaluation as a major factor in their career development and maintenance. The KNUST has moved quickly to establish a quality assurance unit that has started implementing an institution wide evaluation of teaching as the first step towards ensuring quality in the core business of the University, i.e. teaching, research and service.

**Administrative and Management Structures and Processes**

Given the changing university environment it may be deduced that higher education in Ghana will undergo some transformations to respond to the changes as suggested by Amir, Levy and Uri (1986), Braimah (1999), Nevis, Lencourt and Vassallo (1996). With the establishment of private Universities, competition will soon emerge between them and the existing public Universities especially now that fee-paying among Ghanaian students is gradually being institutionalised. In addition to competition with private universities, public universities are growing from their present sizes characteristic of elitist universities to mass universities. With these developments it is evident that the present traditional management structures and procedures will not be able to cope with the changing environment in the higher education sector.

The major drive for changes in management will come from the need for revenue diversification in response to the dwindling government funding. Universities are now considering all possible means of generating income including full fee recovery. The greatest challenge for Ghanaian Universities in the new millennium is to ensure that their leaders are not only academic managers, but also proven businesslike and entrepreneurial chief executives. The success of any Ghanaian University will depend on its ability to select and appoint leaders with good entrepreneurial skills and transparent financial management records with the ability to command the necessary support for the transformation of the institutions. This is one way by which the Ghanaian University can ensure that management structures are restructured and designed to deliver at minimum cost to satisfy the growing complex needs of the stakeholders. For institutions to remain public and yet behave in a business like manner as recommended by Lenington (1996), management must be proactive whilst paying more attention to the management of change. The tomorrow's university manager will definitely be different from yesterday's manager because the former will have to break loose the strong bureaucratic controls characteristic of public institutions. Adesola (1991), Fairweather, (1988); Meurer (1980), Rollman (1986) have sufficiently analysed the implications of the adoption of business practices in higher education and there appears to be a common agreement that the practice would yield more benefits than expected.

**Equity Considerations in Access to Higher Education**

Whilst experimenting with the various forms and levels of cost recovery through fees, a challenge for university managers is to ensure that equity is not compromised by the need for financial sustainability of the universities. The role of the
universities in the identification of needy students for support cannot be overemphasised. As public institutions, government has a responsibility to intervene in the implementation of full cost recovery through student fees to ensure that access to higher education does not only depend on the ability to pay but still reflect on the ability to learn. The challenge for the institutions is to help government to develop means of ensuring that equity considerations are taken care of otherwise polarisation and social stratification with its adverse effects such armed robbery cannot be averted. The KNUST has set the pace through its new policy of offering admission to students from less endowed secondary schools. Such policies need to be carefully studied and monitored to perfection and possible replication elsewhere.

There is also the need to institute very transparent formats and procedures for the identification of needy students and institutions to benefit from the many educational endowment funds (both public and private) that are being established to support the development of education. The equity considerations may be extended to include other forms of exclusion such as gender, disability, age, location etc.

**Networking and Partnership Development**

Networking with other institutions at local, regional and international levels for knowledge creation and sharing remains a challenge for institutions. There are already various forms of networks and collaborations and it is expected that with the deployment of ICT, stronger and wider networks will develop with greater opportunities for the development of higher education in Ghana.

**CONCLUSION**

From the above discussion there appears to be limited choices for higher educational institutions in Ghana and indeed Africa. The choice is to remain stagnant and suffer from neglect and extinction through competition or to radically transform and face the ensuing challenges in order to enjoy the benefits of the changing environment.

The KNUST has embarked upon a number of measures aimed at radically transforming the institution in order to address the challenges analysed above. It is worth noting that such efforts need to be carefully managed because the success of the transformation will depend to a large extent on the management of the change processes and the ensuing resistance. No matter the level of commitment of University leaders to address these challenges, their success will depend to a large extent on their ability to manage the change processes. The process of transforming the Universities is sustained by institutionalising critical self-evaluation that will address the changes as they emerge.

The obvious strategic option for each institution is to remain focused but at the same time endeavour to develop and/or maintain niches. There are several of such niches in the universities that could be strengthened.

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