GLOBAL CHALLENGES IN HIGHER EDUCATION IN CURRICULUM DESIGN IN AFRICA

Dr Christiana N. Nwadiokwu
Department of Curriculum Studies,
College of Education, Agbor,
Delta State.

And

Favour E. Nwadiokwu
Department of Curriculum Studies,
College of Education, Agbor,
Delta State.

Abstract

The paper identified the most important challenges of higher education, including faculty and staff shortage, problems of quality and relevance, problems of governance, leadership and management, weak research and innovation, problem solving capacity. Financial austerity lack of capacity to diversify funding sources, poor physical facilities, poor infrastructures and inability to meet increasing demand for access and equity. This paper outlined the role of higher education for Africa's development, including social, economic and political benefits, development of critically needed human capital, provision of equitable access to the young and life long learners, support to other levels of education, and linkage to the world of work and the international community and knowledge society. A literature review study was conducted to synthesize available information to clearly outline the major challenges of higher education institutions and systems in Africa, to identify new paradigms and opportunities for higher education developmental contribution to Africa's development and to identify lessons of experience for effective implementation of the initiative. Based on the above, it was recommended that funding of higher education should be given priority, stakeholders in the labour force and industry should be involved in curriculum planning. Higher education curriculum design should encourage practical hands-on experience for graduates of higher education to be relevant.

Keywords: Global Challenges, Higher Education, Curriculum design and Economy.

Higher education needs a technological revolution that will have a greater impact on society than the transition from an oral to a print culture. The study will help the higher education provider in connecting the teachers, the students and the community to the wealth of knowledge that exists in the world. The teacher in higher education should be transformed from primary role as a dispenser of information to orchestrator of learning and helping students turn information into knowledge and knowledge into wisdom.

Policy makers and even the general public in Nigeria still respond resoundingly negatively when challenged to adopt a new paradigm of education. Most higher education curriculum design today still adhere to a paradigm of education in the 19th century. The question arises: How should higher education be structured to meet the global challenges in this 21st century world? How do we define "Higher Education" and "curriculum"? Higher education could be defined as a project-based curriculum design for life aimed at engaging students in addressing real-world problems and issues important to humanity. With this definition, there will be a dramatic departure from the factory-model education of the past, final abandonment of textbook-driven, teacher-centered and paper/pencil schooling. It means a new way of understanding the concept of "knowledge" and concept of "educated person". On the other hand, curriculum for higher education should be designed to create a "culture of inquiry". These skills learned through the curriculum should be interdisciplinary, integrated, project-based and research-driven. This is in line with Lewis, (2010)[1] who outlined seven (7) skills that are needed as follows:

- Curiosity and Imagination;
- Critical thinking and problem solving;
- Agility and adaptability;
- Accessing and Analysing information;
- Initiative and entrepreneurialism;
- Collaboration across networks and leading by influence;
- Effective oral and written communication.

Based on the above, if engraved in higher education curriculum, students make exponential growth in their basic skills of reading, writing, speaking, listening, researching scientific explorations, multimedia skills and more.

Global Challenges in higher education will be reduced to the barest minimum if the curriculum incorporates higher order thinking skills, multiple intelligences technology and multimedia.

Literature Review

Knowledge is not memorization of facts and figures, but is constructed through research application and connected to previous knowledge, personal experience, interest; talents and passions. The skills and content become relevant and needed as students require this information to complete their projects. The content

and basic skills are applied within the context of the curriculum and should not be an end in themselves.

Jodi (2010), asserted that "Students use the technological and multimedia tools now available to them to design and produce websites, television shows, radio shows, public service announcements, mini-documentaries, how-to-DVDs, oral histories and even films." Naturally students, learn what it is to be a contributing citizen and carry these citizenship skills forward throughout their lives.

According to Douglas, (2010), everyday students from countries all over the world collaborates on important projects like the e-Pals. This is a site where teachers and students can go to join or start a collaborative project with anyone in the world. The researchers' experiences from the media, from university research and as it was demonstrated in the video, technologies, especially the internet have resulted in a globalized society. Higher education should be transformed to conform with the world's ever-increating rate in Nigeria. From environmental awareness to producing scientists, environmental relations experts, media procedures, higher education will assist students in finding the answers to our environmental problems.

Diversity courses teach students skills they need to succeed in the present century. There is a course titled "International Relations, conflict and community Resolution". Here students are taught how to address constructively conflicts that arise among and within different groups and explores the possibility for building community across racial and ethnic boundaries. Such courses and scores of other across the country will teach students valuable skills that will enable them function in a diverse world. This is in line with Tananka, opined that a diversified curriculum can help bridge differences both on campus and in the society. Learning about the diversity of Nigerians and global cultural traditions brings groups of students together rather than dividing them.

Furthermore, Lopex in his dissertation documented some positive impact on sutdents' learning based on curricular changes His study revealed that faculty which emphasis on diversity in courses has positive effects on openness to racial understanding and overall satisfaction with university.

Theoretical Framework

This study anchored on the theory of transformative learning by Mezirow. According to Mezirow (1991), transformative learning is the kind of learning we do as we make sense of our lives and it is triggered by a problem. Transformative learning is not just learning but consist of a change in people's beliefs, attitudes and ways of doing things. Mezirow believes that learning occurs when an individual is able to change his entire perspective of something. Burns (2002) asserted that transformative learning occurs through a number of phases which begins with the disorientating dilemma which is followed by phases of self examination, critical

assessment of assumption, exploration of new actions, development of plans for action and reintegration of new perspectives into people.

With regards to this study therefore, transformative learning will entail a reorientation and reorganization of higher education curriculum to bring about changes in the attitude, beliefs and general lives of the students to broaden their reach out so as to help them operate and function in a globalized environment.

Importance of Higher Education for Africa's Development

Africa has serious challenges in terms of social progress, technological advancement and economic development. Thus, there is a widespread and legitimate concern about Africa, both by Africans themselves and the international community. Higher education is essential for Africa's development. East Asia and India have shown that higher education with good governance and sound infrastructures have been critical to their economic success. Potential impact of higher education in the strengthening of institutions, governance, social development, scientific innovation and technological advancement is clear. The most important roles of higher education are briefly described below.

- **Economic Benefits**

In terms of economic benefits, higher education facilitates employment, increases salaries and savings, improves working conditions and mobility for the individual; and brings about greater productivity, national development, increased consumption and transformation of low skills industry to knowledge based, economies for the public. It is a critical element of competitiveness and prosperity in an increasingly knowledge based global economy. Tertiary education exercises a direct influence on national productivity, which largely determines the level of living and a country's ability to compete in a global economy.

- **Social and Political Benefits**

Social improvements accrued to higher education include improved quality of life for self and family, better decision making, increased personal status and opportunity for the individual; and development leadership, social mobility, greater cohesion and reduced crime rates. Higher education enhances the political context by contributing to building civil society, enlightened citizenship, self-reliance, equal opportunity and skills and values of argumentative dialogue and reasoning, tolerance and respect. It facilitates national development by promoting democratic ideals, as well as intellectual and industrial competitiveness; by promoting greater social cohesion, peace, trust in social institutions, democratic participation, and appreciation of diversity in gender, ethnicity, religion and social class. It also improves the accountability of government and generates independent research and analysis that

supports the vibrant debate that can greatly improve the effectiveness of government policy and other services.

- **Human Capital and Professional Development**

Higher education is critical to building human capital (for example, accountants, doctors, engineers, lawyers, teachers, leaders, administrators, entrepreneurs, critical thinkers, etc.) that in turn builds the very institutions that are regarded as an indispensable factor for development. It is these educated individuals who develop the capacity and analytical skills that drive local economies, support civil society, teach children, lead effective governments, and make important decisions which affect entire societies. Highly educated human capital is necessary to compete in an increasingly knowledge based global economy.

- **Knowledge generation and adaptation through research and innovation**

Tertiary institutions support knowledge driven economic growth strategies and poverty reduction by generating new knowledge, building the capacity to access existing stores of global knowledge and to adapt that knowledge to local use. Technical innovations and their diffusion lead to higher productivity, and most of these innovations are products of basic and applied research undertaken in universities. Progress in the agriculture, health and environment sectors, science, engineering and technology are highly dependent on the application of such innovations.

- **Equitable opportunity and access provision**

Access to tertiary education can open better employment and income opportunities to underprivileged students, thereby decreasing inequity. Higher education improves participation of individuals from relatively under represented segments of the society, including women and specific ethnic groups, in the overall socio economic and political life of the nation.

- **Support other levels of education**

Tertiary education supports the rest of the education system and it is doubtful that any developing country could make significant progress towards achieving Millennium Development Goals (MDGs) and poverty alleviation, without strong tertiary education systems. Tertiary education is necessary; for sustainable progress in basic and secondary education, through the training of teachers, school leaders and administrators, and through research providing direction for policies and strategies of a country's education system.

- **Promote linkage to the world of work**

Higher institutions are a country's skill base, knowledge source, and public space facilitating exchange of information and transforming the economy through university-industry linkages. Through their curriculum, research and community services, higher institutions serve as a platform to integrate the demand from industry or the world of work and provide educated workforce with relevant training and meaningful contribution to progress and development.

- **Promote international cooperation**

In an increasingly knowledge based global economy, linkage and cooperation between nations and institutions has become indispensable. The most relevant and plausible points of entry for such exchanges towards knowledge adaptation, generation and dissemination are the higher institutions. Thus, higher education promotes cooperation and collaborative works with development partners, regional counterparts and communities, as well as teaching the research institutions locally, regionally and globally.

Major Challenges of Higher Education

Higher education globally faces several challenges which can be grouped under seven headings, as discussed below.

- **Faculty shortage and development**

The shortage of skilled professionals in Africa has its roots in tertiary education systems that are in crisis. Although Africa's universities ought to be the breeding grounds for the skilled individuals needed by the continent plagued by critical shortage of teaching faculty and research scholars. The situation is more serious with respect to the shortage of senior faculty at levels of Doctors of Philosophy (Ph.D). Higher institutions in almost all African countries are largely unable to retain qualified faculty and research scholars They also face shortage of technical, administrative and management staff. The Situation is crippling not only the higher institutions but also affects the other levels of educational services, health care systems and overall economic activities. Shortage of faculty and other staff is further amplified, by brain drain, retirements, unattractive working conditions and the attrition of HIV/AIDS.

- **Governance, leadership and management**

Weak leadership, management and governance exacerbate the challenges faced by higher institutions in Africa. Management inefficiencies drain scarce resources away from the fundamental objectives of increasing access, quality and relevance and thinly spread human and financial resources. Underutilized facilities, duplicative programme offerings, low student-staff ratios, high dropout and repetition rates, uneconomical

procurement procedures, and allocation of a large share of the budget to non-educational expenditures are largely related to management and leadership inefficiencies and capacity limitations. Academic leaders are rarely trained in the management of higher education institutions. Generally institution leaders at all levels are poor in strategic planning, market research and advocacy, research management, financial planning and management, human resource management, performance management and partnership building and networking skills.

- **Problems of quality and relevance**

Africa's higher education institutions face a decline in quality of educational learning and research. Universities operate with overcrowded and deteriorating physical facilities, limited and obsolete library resources, insufficient equipment and instructional materials, outdated curricula, unqualified teaching staff, poorly prepared secondary students, and an absence of academic rigour and systematic evaluation of performance. Lack of access to the global knowledge pool and the international academic environment has a big contribution.

"There is a widespread concern in the relevance of curricula, as expressed by the overall mismatch between programmes of study and labour market requirements. Institutions are generally ineffective at preparing students with applicable skills and reflecting the needs of the employment market. For example, agricultural education and training is often out of synch with labour market demands in terms of knowledge and practical competencies, especially in agri-business, basic management and problem solving. Education and training curricula tend to be obsolete and disassociated from the economy. Practical instruction receives insufficient emphasis and students have little opportunity to develop technical competencies, problem solving experience or communication and organizational skills. Absence or lack of effective regional, national and institutional quality assurance and enhancement systems and agencies in African countries and universities further exacerbate the problems of quality and relevance. Structured quality assurance processes in higher education at the national level are a very recent phenomenon in most African countries but the situation is changing rapidly. Technical capacity is the most pressing constraint in national quality assurance agencies and institutional systems.

- **Weak research and Innovation capacities**

Higher education institutions in Africa do not yet posses adequate research capabilities, infrastructure facilities and funding needed to make them active beneficiaries of global knowledge and/or to generate or adapt knowledge, innovation and problem solving. Higher Institutions in Africa face critical shortage of staff to adapt and generate knowledge and innovate. There is little investment in research and innovation, particularly in high priority areas, such as agriculture and natural resources, applied sciences, health sciences, engineering and technology, limiting

their capacity to meaningfully contribute to Africa's development and integrate themselves to the global knowledge network.

Expansion and development of post graduate education in many countries is very slow except in South Africa. These circumstances seriously constrain the building up of those elements of national innovation systems that are so essential for increasing national productivity- research capacity, university trained researchers and professionals, graduates with advanced technical and managerial skills and dynamic university-industry linkages.

- **Financial austerity and lack of capacity for diversification**

Higher institutions in Sub Saharan Africa are critically constrained by lack of adequate finance, due mainly to poor economic conditions, competing public service priorities, and weak support of the international community. Financial austerities have led to inability to retain quality faculty and staff, minimizing staff-student ratio, and poor learning and research facilities and resources. Institutions are increasingly forced to diversify revenues, but usually with very limited experience, expertise and capacity in managing these challenges of financial diversification and resource mobilization. The lack of adequate funding has constrained research capacities across Africa, influencing their competitiveness in knowledge generation and adaptation, as well as integration in the global knowledge society.

- **Poor physical facilities and infrastructure**

Higher institutions in Africa have seen little or no infrastructure improvements in the last few decades. Learning infrastructure is widely deficient due to insufficient budget and overdependence on public financing. Infrastructure, such as internet access, library, textbooks, equipment, laboratories and classroom space are critical bottlenecks resulting in deterioration of quality of learning. The poor state of facilities also affects the quality of research and its ability to contribute to societal development and progress.

- **Inability to meet increasing demands for access and equity**

Institutions in Africa are increasingly unable to absorb the increasing demand of students for higher education. Increasing number of students graduating from secondary schools led to corresponding pressures in the demand for higher education. The current rate of increase in higher education enrollment is doubling in five years (*http://www.grp. harvard.edu/AfricaHigherEducation/Economics2html/*) (- at growth of 15% a year - the fastest in the world). Among the unresolved challenges are the need to expand tertiary education coverage in a sustainable and equitable way, as well as inequalities of access and outcomes, in relation to gender, ethnic groups and geographical coverage. Graduate level (M.Sc. and Ph.D) students enrollment are small. Of concern is also the small enrollment figures in sciences, engineering and

technology, and health fields, which are critically needed for innovation, knowledge generation and adaptation and overall national competitiveness. Less than 30% of students in higher education institutions in Sub-Saharan Africa are enrolled in the fields of agriculture, health sciences, engineering and technology and basic and applied sciences.

Conclusion

Some of the challenges faced by African higher education can be dealt with at the institutional levels, a number at the national level and yet others require a regional approach. If African governments and higher institutions are to meet those challenges, they need to plan and innovate. Their policies require commitment and collaboration of all the stakeholders. There is no reason why African countries cannot transform these challenges into opportunities to make their higher education sector a vibrant and productive one.

The 21st century is characterized by a society where things are changing in such an exponential pace and education, in particular higher education is required to prepare students to adapt to the change by equipping them with skills; knowledge and information to cope with this astronomical pace of change. To achieve this, higher education curricular must be reformed to be responsive to the demands of this global change. The content of higher education programme must be changed to reflect the changing society in order to prepare graduates who are employable, adaptable, resourceful, flexible and equipped with basic skills and knowledge that will enable them to take advantage of globalization and what the 21st century has to offer.

Recommendations

To overcome global challenges in higher education in curriculum design in Africa, the following recommendation are made:

1. The content of higher education curricular should be made to enhance the personal competence and qualities of the learner as well as emphasize competency based training.
2. The use of ICT in delivery teaching /learning in higher institutions should be made compulsory and encouraged to enhance the quality delivery in higher institutions.
3. Higher education curriculum should encourage technological innovation, economic reconstruction as cultural diversities which are key factors in human survival in the 21st century.
4. Higher education curriculum should encourage the integration of sciences, vocational education and humanities to ensure all round development of learners.
5. Education especially higher education must be placed in a strategic position and given priority in development. This implies that the curricula must be

restructured, re-organized and refocused to serve the social, economic and political needs of the recipients and the society in general.

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