# INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) CAPACITY-BUILDING BY ACADEMIC STAFF OF NIGERIAN UNIVERSITIES

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**Abstract**

The paper argued that university education is witnessing a transformation in information and communication technologies for development. This presents both a wrenching challenge and a remarkable opportunity both of which authors would be exploring in this review. Academic staff must see the digital revolution as not just a better way of teaching, learning, and research but as a fundamentally different way of leveraging themselves and the profession to suit the 21st century knowledge society. ICT affords academics the opportunity of asserting their presence globally and reclaiming Africa's intellectual uniqueness. However, constraint to ICT capacity-building within the academic environment was highlighted. The study presents recommendations to improve ICT capacity building in the university system.

The consciousness to perceive and define university education in home context, and thereby design viable knowledge ecology for the citizenry has not been much of the vision or virtue of governance mentality as well as classroom education in Nigeria. Information and communication technology (ICT) and its impact on Educational Development in this 21st century, thus becomes a notable exemplar. aimed at introspecting, redefining and positioning Nigeria and Africa Universities in general in world context. University education in Nigeria must prioritize ICT in vision and content for a noble posterity. The mission should aim to discern and reinstate viable ICT framework that will reposition the Nigerian University system to meet the dictates of the 21st century world class university system.

More urgently than ever in its long history, the world of university education feels the need to engage in a process of change, adaptation and modernization. The capacity people have to adapt to change is influenced by a number of organizational and personal factors. The government of Nigeria in collaboration with all stakeholders in the university sector is developing ICT facilities and processes in universities which are expected to have a good impact upon educational development. In spite of all these academic staff expected to embrace ICT have reacted in a variety of ways to the introduction of ICT which should, by this stage, be transforming academic, administrative and teaching programs.

Over the last decade or so, academic staff of Nigerian universities continued to be confronted with the use of the new information and communication technologies (ICTs) in teaching, learning and research services. Hence, ICT capacity-building among academic staff and its use in influencing the development of educational sector has become a thing of emphasis. Much research has been carried out in the area of ICT adoption and application which continue to be one of the hottest research topics in higher education today, Trucano, (2005) noted that ICT can empower teachers and learners and promote the growth of skills necessary for the 21st century workplace. As a long-term solution to the issue of lifelong learning (Zhang, Zhae, Zhou and Nunamaker, 2004) and is a growing trend internationally (Bates, 2005).

Academic staff and learners no longer have to rely solely on classroom, printed books and other materials in physical media housed in libraries for their educational needs. The internet and the World Wide Web promise to reduce that sense of isolation and to open assess to knowledge in ways unimaginable not long ago. When used appropriately, ICTs enable new ways of teaching and learning rather than simply allow teachers and students to do what they have done before in a better way. Tinio (2002) lent credence to this when he opined that these new ways of teaching and learning are underpinned by construedvist theories of leaning and constitutes a shift from a teacher-centered pedaaogy-in its worst form charac:e-by memorization and rote learning - to one that is leaner-centered.

In specific terms, skills that are competent and constantly given developmental training among academic staff will be required for the success of the university system. In our quest for the

realization of our vision 20-2020, we do recognize that our capacity to emerge within the club of the twenty largest economies by 2020 as envisaged by our collective resolve will depend on the extent to which our human capital is developed and transformed to compete globally (Egwu, 2009). In Nigeria, demand for university education far outstrips supply and governments and various stakeholders are turning more and more to the use of ICT to bridge the access gap. Curtin, (2002) defined ICT as "sets of activities, that are facilitated by electronic means; the capturing, storage, processing, transmission, and display of information " ICT is the combination of the computer, telecommunication and media technologies (UNESCO, 2005). There is a general consensus that acquisition of ICT skills among academic staff will improve teaching and learning. On research on cognition and learning (Bransford, Brown and Cocking, 1999) stressed the importance of creating learning situations in which students engage in authentic tasks and work collaboratively supported by ICTs.

The use of ICT as a delivery medium is in itself a benchmarking process and can provide strong guidance to those exploring the needs of tertiary learners in terms of ICT skills and expertise (Oliver and Towers, 2000). Sufficient reading and mathematical literacy (the ability to utilize ICT effectively) is becoming an additional educational necessity. Hence the need for trained lecturers who will implement technology integration in universities becomes a sine quo none The level of skills needed by lecturers to independently function in a web-based on-line teaching and learning environment became a benchmarking standard that guided the development of the 21st century knowledge society. It is a truism that technology by itself is not enough to transform education processes and improve educational outcome. Appropriate and effective use of technologies involves competent, committed intervention by people (Haddad, 2007).

**Asserting Academic Presence Globally through ICT Capacity-Building**

The expectation of the researchers are challenging Nigerian University authorities and the intelligentsia to muster mental independence needed to formulate ICT backed educational frameworks and benchmark that would contribute sublime Nigeria-sensed knowledge paradigm to compete in the global knowledge mentality. The advocacy is for advancement imperatives mat take cognizance of world knowledge standard hence Egwu (2009:3) noted that:

> The Nigerian Universities must produce world class manpower which can be made possible only through world class University Education System, characterized by the availability of world class physical infrastructure, world class instructional facilities and above all, world class human capacity to impact knowledge, conduct research, publish the outcomes and administer/run the institutions properly.

Cheema, (1997) identified four levels of capacity-building: the individual, the entity, the interrelationships between entities, and the making of an enabling environment. In this presentation the individual is the academic staff, the entity is the university, the interrelationship are the invents occurring between universities globally and in Nigeria to be specific, and the environment presents the extent to which human and material capital are developed to compete globally Capacity-building is forward-looking and the reforming of educational practices (Seddon, 1999). Capacity building in this context refers to the process by which academic staff becomes more skillful at using ICT tools for fulfilling teaching and learning objectives. One of the factors that will continue to have considerable influence on contemporary perceptions of ICT capacity-building as it applies to the university education sector is the growing use of ICTs as medium for the flexible delivery of programs and courses. Indeed, ICT has enabled universities to expand on their current geographical reach, to capitalize on new prospective students, and to establish themselves as global educational providers.

When effectively integrated into a university learning environment, researches have demonstrated that ICT can help deepen student's content knowledge engage them in constructing their own knowledge and support the development of complex thinking skills (Kozma, 2005, Kulik,

2003, Intebb and Cox, 2004). Besides, the university administration and academic support services particularly require the use of ICT to provide effective and excellent services. Hence, Laurillard (2002) argues that "universities must adapt to this change and become leaders in the application of technologies as learning tools and adopt strategies that facilitate active learning. This challenges the conventional approach where the academic has the role of an expert delivering knowledge to the learner. Becker and Riels (2000) co-relational study suggests that there may be teachers rising to the occasion in order to offer their students more opportunities for active engagement in learning. These categories of academics need support in the area of ICT competence skills because their effor integrate ICTs into teaching and learning is a form of professional enhancement Light (2009), spotted three changes in teacher's knowledge, beliefs and attitudes to be:

1. Their beliefs about how students learn are shifting
2. They had a deeper understanding of new teaching strategies and
3. They had improved their knowledge of how to use ICT as a learning tool as well as strengthening their ICT skills.

These review reported in this paper reinforces the need to reconsider the varying roles required to deliver effective online learning and highlights the conventional approaches are not sufficient. Though ICTs present a serious challenge for many academic staff whose own formative educational experiences and professional orientations were shaped under different circumstances. Hence the present day academics are expected to be skilled in using computer, networking and the internet in order to compete globally in teaching, learning and research. Teacher anxiety over being replaced by technology or losing their authority in the classroom as the learning process becomes more leaner-centered, an acknowledged barrier to ICT adoption can be alleviated only if teachers have a keen understanding and appreciation of their changing role (Tinio, 2002).

**Reclaiming Nigeria's Intellectual Uniqueness through ICT**

The consumption mentality that currently disables intellectual acuity in Nigerian universities and polity systems operators need to be exorcised as an alien affliction. The contention is that Nigerian universities should not isolate themselves from the positive aspect of these modern agencies of mind formation and societal advancement. Hence academic staff needs to muster original intellectual genius in global knowledge interchange. That would be assured by a holistic approach to ICT-capacity-building grounded in home knowledge that is nurtured with consciousness for acknowledging compatible developments in global knowledge milieu.

Given the wide disparities in access to ICTs between developed and developing countries and between different universities within Africa and beyond, there are serious indications that the use of ICTs in university education will widen existing divisions drawn along economic, social, cultural, geographic, and gender lines. A formidable challenge therefore, continues to face academic staff and university authorities in general. While the use of ICT across university education has been established, integration into the teaching and learning process has been slow (Harrison, Comber, Fisher, Haw, Lewin, Lunzer, Mofarlane, Maver, Scrimshaw, Somekh and Wathing, 2002).

The emphasis then should be that university authorities should provide various programs for their academic staff, to deal with the challenges of facilitating learning at both undergraduate and postgraduate levels. Formal training for both departments and individuals can be supplemented with a more centralized and individualized support focus. Ironically, it should be noted that the theme of academic staff development in ICTs does not surface in projects when the focus is on advanced form of knowledge building in the Nigerian university system.

The indispensable nature of the academic staff in university education cannot be overemphasized The lecturer plays a key role in the effective delivery of teaching and learning initiatives as it is the lecturer, not the technology, that facilitates the students learning experience.

Hence, Wilson (2001) suggested that three characteristics of the lecturer will control the degree of learning: attitude towards technology, teaching style and the control of technology. The capacity-building is not restricted to improving the ICT skills of academic staff but more importantly the intention is to exploit the potential of ICTs to build the professional competence of the academics, to develop their proficiency in classroom management practices, to enhance the quality of instructions and others.

The last two decades have seen a critical examination of the role of universities in economic growth and social development. In addition to teaching and research, contributing to regional economic growth through innovation is now perceived as the third role of universities. The rapid worldwide social and economic transformation that is captured in the notion of Globalization has had an impact on higher education institutions, with increased pressure to provide more graduates with high-level knowledge skills (Czemiewics and Brown, 2009). In the apt words of Tagwira, African University vice chancellor:

> My message for my colleagues when it comes to ICTs is that we have no option. We must fight hard to make sure our institutions are IT networked, because the rest of the world will leave us behind. If Africa wants to bridge the digital divide, higher education institutions must take the first step.

In the light of the above statement universities in Africa and academics in particular should embrace ICT in its totality. The bitter truth is that if you do not embrace ICT as an academic, you will expire. You have to stay on the cutting edge if you want to be relevant. Constraints to ICT Capacity-Building in Nigerian Universities

Attainment of the national targets (educational development) relies strongly on information and communication technologies. Though the acquisition and deployment of these technologies have also been found to be faced with such challenges as:

i. Severe shortage of ICT skills and personnel;
ii. Weak ICT backbone;
iii. Poor and expansive bandwidth provision;
iv. Obsolete ICT infrastructure and services;
v. Low retention of ICT staff,
vi. Low ICT and ICT related research;
vii. Inadequate funding of ICT for development and deployment; and
viii. Provision of energy (Ruqayyatu, 2010).

The problems of ICT-capacity building require strong personnel and institutional commitment and policy as well as regional approach for joint negotiations on the cost of bandwidth. In the words of Adam (2003) issues such as increase in the number of students entering colleges, matched by decline in the number of qualified teachers, the mounting demand of qualified teachers, the mounting demand for accountability, and apprehensions about the social and economic roles of higher education. African universities suffer from poor, inefficient and highly bureaucratic management system. Poorly trained and poorly qualified personnel; inefficient, infective, and out-of-date management and administrative infrastructures, and poorly remunerated staff are norm (Teferra and Altbach. 2004).

Within universities themselves, the adoption of ICT is not an easy task for academic staff, decision makers within is sometimes reluctant to change curricula and pedagogic approaches; academic staff lack incentive and rewards in our university system when professional status and carrier trajectories are based on research result rather than pedagogic innovation. An educational innovation is likely to require that new understandings and skills be incorporated into teaching

practice (Kenny, 2003). This requires academic changes which will come about "when the academic staff themselves consciously examine their own practice, their situational constraints in which they work and the consequences of their actions.

**Conclusion**

Nigerian universities and academics in particular should embrace ICT in its totality. The use of ICT as a delivery medium is in itself a benchmarking process and can provide strong guidance to those exploring the needs of tertiary learners in terms of ICT skills and expertise becoming an additional necessity. Hence there is need to train all categories of lecturers, who will implement technology to achieve the needed development.

**Recommendations**

In the light of the above, university authorities should:

1. Provide various programs for their academic staff to deal with the challenges of facilitating lea-through the use of ICT.

2. Establish a team of professional support who will be involved in academic staff training, the design and development of technology enhanced learning environments.

3. Provide ICT facilities, because access to appropriate facilities, training and support are seen as key elements of the competence strategy.

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