REFORMS AND INNOVATION IN BUSINESS EDUCATION: INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) PERSPECTIVE

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Abstract
Education in Nigeria cannot be relevant without effective preparation of new generation of students to effectively use the new information and communication technologies in their professional practices. Business Education cannot afford to be static when its environment is changing, especially the change that is highly propelled by information explosion engendered by information and communication technology (ICT) development. However, ICT was addressed as a means of reforms and innovation in Business Education. It was therefore recommended that, the business education curriculum should extend its dragnet to fully imbibe the rapid changes occasioned by ICT, through a strong school - industry linkage or partnership.

Introduction
Information and communications technology (ICT) has penetrated all facets of the Nigerian economy and its role in the economic, socio-political, cultural and educational development of the nation is no longer a hear say. As the world is going through a scientific revolution, only those who are adequately prepared for it could function efficiently. Business education, which stresses skill acquisition and the preparation of individuals for the world of work, has undergone different reforms and innovation, since inception until now. Modern computers are out – Leaving typewriters, information technology is spreading across all frontiers of education and complex equipments for teaching business education are on the increase (Oroka, 2007).

However, Ikelegbe (2007) noted that education in Nigeria today cannot be relevant without effective preparation of new generation of pupils and students to effectively use the new information and communication technologies in their professional practices. Business education cannot afford to be static when its environment is changing, especially the change that is highly propelled by information explosion engendered by
Generally, education in Nigeria has been perceived as an instrument per excellence for effecting national development (FRN, 2004:4). Government has stated that for the benefit of all citizens, the country’s educational goals shall be clearly set out in terms of their relevance to the needs of the individuals and those of the society, in consonance with the realities of our environment and the modern world. It is imperative to adopt and fully utilize ICT in reforming business education, in order to achieve the laudable goals and objectives embedded in the National Policy on Education.

In the past, record generation processes involved taking dictation in short hand from the boss and transcribing same using a typewriter. Letters were generally sent by the post and telephone conversations were by means of analogue, landlines. Today, innovation is on the high side, were progressive organizations are steadily moving into the era of the paperless office which is characterized by the use of computers and their networks especially the internet. In modern offices, emphasis is now placed on skills for digital transactions. This is because ICT has brought about e-business, e-commerce, e-banking, e-mail, etc. This changes has placed a demand on the business education programme to produce graduates that can cope with this global and rapid technological advances in the present day society. Therefore, the central focus of this paper is to x-ray reforms and innovation in Business Education through information and communications technology.

Concept of Reforms and Innovation
Reform is defined according to the Longman Dictionary of contemporary English (2001) as a change made to a system or an organization in order to improve it. The central meaning to reform is change and one of the areas that have experienced tremendous change is ICT, where it has reduced the world to a global village.

Amaewhule (2007) stated that; experts, researchers and scholars agree that global competition and rapid technological advances have changed radically the nature and content of the world of work along with the skills required to get the job accomplished. Measuring the full impact of change requires an in-depth focus on the future.

Innovation refers to the idea applied to initiating or improving a product, process or service. It concerns a desirable entrepreneurial trait that relates to change. It does not reside within an environment; it is not culturally bound and not limited to persons within large or small organizations. As individual gather experience, education and maturity; the right factors merge to make the individual become more innovative. Thus those who have open mind and take time to learn the skills required to be innovative may apply innovation on regular basis (Olannye, 2007).

Reforms and innovation are no longer new concepts to the academia, as the only thing permanent is change. The
method of processing information through electronic activities has changed and has become more sophisticated. For example, in the past, technology was supportive because it served as an aid to educators but innovations in information technology (IT) have shifted this role from being supportive to integrative. Visual aids were used by educators for illustration but today both students and teachers operate these equipment, especially, IT equipment, which are used by students to learn in the absence of a teacher.

**What is Information and Communication Technology (ICT)?**

Information and Communication Technology (ICT) is a new concept, which is a combination of two previously unrelated concepts, (1) information technology and (2) communication technology.

Information technology (IT) is the term used to describe the equipment and software elements that allow an individual to access, retrieve, store, organize, manipulate and present information by electronic means. On the other hand, communication technology (CT) is the term used to describe equipment, infrastructure and software through which information can be received and accessed, for example, phones, faxes, modems, digital networks, etc.

According to Adeyeri (1999), information technology (IT) is a systematic body of tools, techniques and infrastructure used for generating, collecting, storing, processing and transmitting information (data). While communication technology, on the other hand, is the transfer of information, ideas, beliefs, orders or instructions from one person or group to another through both wired and wireless communication.

ICT is the use of hardware, software, services and supporting infrastructures to generate, manage and transmit information as audio, video and text messages. Furthermore, Ikelegbe (2007) deduced that information and communications technology carry out the following functions:

- Collecting information
- Storing information
- Processing information
- Communication information.

Essentially, a modern information system follows the pattern of communication cycle or process. It is an input–process–output cycle. It involves taking in data (such as raw scores, names, pictures and sounds, information, etc), analyzing this information using computer to process (store, manipulate, rearrange and analyze) the data and finally displaying this processed information to users usually on computer screens, television screens, printers or even through loud speakers (output). The information supplied as output can then be used as a basis for acting on the data that was inputted (feedback).

According to Osunbor (2003), ICT is a concept, which is used to describe the strength and divergent uses of computers and telecommunication devices for data and information interchange. It provides access to information through scientific convention founded on the forte of
computers and telecommunication facilities which enables an organization located anywhere in a country to provide business services to any customer located anywhere in the world. With ICT, the world is further reduced to a global village where transactions can simply be initiated and concluded in the computer right on the user’s desk.

**Categories of ICT and Its Importance in the Education System**

Laudon (1994) in Ikelegbe (2007) categorized the different kinds of information communication technologies into five basic types:

1. **Sensing Technologies**: These are devices that help us to gather information from the environment and translate that information into a form that can be understood by the computer. Examples are; data collection devices such as scanners, computer keyboards, computer mouse, touch. These are technologies that tie together and communicate information between the various kinds of technologies. Examples include fax (screen, etc.

2. **Communication Technologies**: facsimile) machines, land and cellular telephones, computer networks, telecommunication networks, television, radio, video, computers. A network is a group of devices that is linked together. Examples are the private branch exchanges (PBXS)), which is a local area network that helps to connect individual telephone lines within an office. The local area network (LAN), which cover several floors within a building or an entire building or even a campus in case of the school environment. The wide area network (WAN), which covers a larger geographical area, and uses telephone lines, microwaves and satellite communication networks.

3. **Analyzing Technologies**: The computer hardware and software comes within this category. Computers take in information from sensing and communication devices and then store and process the information.

4. **Display Technologies**: These are essentially output devices. They make processed data available to humans for use, either through screens, printers, audio output devices such as loud speakers, printers, display screen like photocopying machine.

5. **Storage Technologies**: This is another important category. They help to store large quantities of information in a form that can be easily accessed. This is made up of the secondary memory of the computer known as the secondary storage devices such as; magnetic tape, magnetic disc, optical discs (CD – ROMs; Read only memory, VCDs; Video Compact Discs, etc).

Information and communication technology (ICT) is a platform for any nation’s growth and development in a rapidly changing and competitive
environment. A nation like Nigeria that aspires to participate in the mainstream of the revolutionized information age characterized by the appetite to wipe away illiteracy must put efficient ICT mechanisms in place, to boost the educational system. The effective use of ICT in educational institutions has the potential to enhance teaching and learning; since there are self-evaluation software programmes to evaluate instructors and other numerous ICT packages, to facilitate teaching and learning.

The Need for Reforms and Innovation in Business Education

Esene (2007:112) quoting Eni (1987) noted as follows ...the process of acquiring skills and knowledge through education is not to be viewed as a form of consumption, but rather as a productive investment by investing in themselves, people enlarge the range of choices available to them, investment in human capital not only increases individual’s productivity, but also lays the technical base of the type of labour force necessary for rapid social and economic growth.

Business education, which equips individuals with relevant skills and knowledge for the world of work, has always experienced different reforms and innovation, occasioned by information age. These reforms are needed and important, in order for the objective of the programme to current with the present day work environment. For instance, Terchler (1985) and De Weert (1994) in Amaewhule (2007), in looking through proposals made by employers in various countries with respect to the future of education, identified the following characteristics as relevant for graduates seeking employment in this new age:

- Be flexible;
- Be able and willing to contribute to innovation and be creative;
- Be able cope with uncertainties;
- Be interested in and prepared for life long-learning;
- Have acquired social sensitivity and communicative skills;
- Be able to work in teams;
- Be willing to take on responsibilities;
- Become entrepreneurial;
- Prepare themselves for internationalization of the labour market through an understanding of various culture;
- Be versatile in generic skills which cut across different disciplines, and be literate in areas of knowledge which form the basis for various professional skills for example in new technologies.

In the same vein, Amaewhule (2007) citing Treuhaft (1995) stated that education has been driven by forces of change to respond to developments in the workplace. He made the following findings:

- Employers are seeking employees who are technology and information literate.
- The education of new knowledge workers requires emphasis on information access, problem solving, analysis, evaluation and decision-making.
Rapid change and uncertainty in the workplace encourages employers to seek individuals who already have the required skills. Learners need frequent short term updating as required skills change. The increasing number of part-time workers requires more flexible access to education. The growth of knowledge in any field is rapidly outstripping any individual’s ability to remain current knowing how to access information rather than memorizing information is central to coping with rapid change.

One of the major aims of business education is the production of manpower, which possesses the requisite knowledge, skill and attitude for harnessing other resources and bringing them together to produce goods and services needed for the satisfaction of an economy. For this aim to be fully achieved, reforms and innovation is a must for the business education programme.

Revamping Business Education Through ICT

There is a burning concern for quality education, particular for educators on who lies the educational future of this country. Education is an instrument for bringing about economic, social, technological and personality change. The content of the training which is taught is obtained from masters of the occupation, not theorists and the teaching content applies, so directly and specifically to the occupation that it has functional value for this occupational and general competency. Therefore, revamping business education through ICT begins by reflecting technology in the business education curriculum to suit the information age.

Ihimepken (2005) in Azuka (2000) remarked that a worthwhile curriculum is never static. It is dynamic. As the society needs change, the curriculum has to change responding to the emerging needs. A curriculum must be adaptive and relevant, so developers of business education curriculum have the responsibility to monitor the technological advancements, and reflect same in the curriculum.

Business education encompasses a number of specialist areas, for example; Secretarial Studies, Accountancy, Management, Marketing, etc. Recent information technology (IT) trends indicate that even more urgent attention to the integration of IT into the Accounting Curriculum is required now (Boritz, 2000) in (Ihimekpen, 2005). Boritz focused on three topics that are particularly noteworthy because of their pervasive impact on business practices. The topics are Electronic Commerce, Enterprise Resource Planning (ERP) System and knowledge management. This development reaffirms the emphasis on IT knowledge and skills being part of the accounting curriculum. ERP systems are company – wide information systems that integrate information throughout the business functions from manufacturing operations through logistics accounting and payroll.
Ihimekpen (2005) deposed that, in Accounts Database Fundamentals, emphasis should be on the use of database management software package, for programmes related to database applications with topics such as planning and designing a database, database creation, data entry, database access, manipulation and updating, sort, index and query functions, database programme related application, and database management application. Students should become proficient in creation, modification and combination of spreadsheets.

In the past, technology was supportive in that is served as aids to business educators, with the use of overhead projectors, opaque projectors, Dictaphones, tapes, slides as teaching aids, audio visual aids or instructional materials. But innovation and reforms via ICT has now made teaching/learning and integration an integrative one, where students can now learn with IT equipments, in the absence of a teacher.

**Conclusion**

Information and communication technology (ICT) has been addressed as a means of reforms and innovation in Business Education. As knowledge explosion occasioned by developments in ICT; new skills and orientations, which our educational system has to grapple with, is now on the increase. The business education curriculum has to extend its dragnet to fully imbibe the rapid changes in the ICT world, as this leap will lead to the equipping of graduates with the right competencies to face the realities in this IT work environment.

**Recommendations**

In the light of the discussions above, the following recommendations are made:

1. There should be a strong school–industry linkage, where industries can always communicate the recent ICT changes about the work environment, and these changes should be reflected in the educational curriculum as occasion demands.
2. Business educators should take it as a responsibility to equip and update themselves on the current ICT packages through in–service training and development.
3. Electronic accounting practices should be made as part of the accounting curriculum to reflect this information age.
4. E-Commerce, Internet Banking, Telecommunicating, Tele-working, etc and other ICT packages needed for the present day secretary should be made as refreshal courses in the secretarial curriculum.

**References**


