Information and Communication Technology (ICT): A Potent Tool for Problem-Solving In Business Education Program

OHAKA, Nyeche Christopher & Dr. AKPOMI, Margaret E.
Department of Business Education, Faculty of Education, Rivers State University, Nkpolu-Oroworukwo, Port-Harcourt, Nigeria
ohakanyeche1@gmail.com

ABSTRACT
The core rationale for the increasing advocacy for the use of Information and Communication Technology (ICT) could be predicated on disparate elements; the pedagogic, social, catalytic, vocational and cost ICT rational respectively. There are four (4) basic ideas that could be considered as the basis for the adoption of ICT in Business Education: the pedagogical, business creation, skill acquisition and knowledge gaining importance. ICT in Business Education is a genuine term that is used to refer to technologies that are used for collecting, storing, editing and passing on information in various forms. But Business Education is an aspect of Vocational Education and learning that relates business and its environment systematically. As a potent tool for problem-solving, ICT in Business Education program enhances the scientific research and data computation of Business Educators by upgrading their analytical abilities which includes the ability to resolve complex problems. The exposure to ICT allows learners in Business Education to develop skills that will give them an edge in an ever-increasing technology-saturated learning and teaching environment. However, insufficient number of computers, paucity of personnel or low self-confidence, and insufficient access to ICT among others, serves as impediment to the use of ICT. Observed findings indicates that, Business Educators are inadequately encouraged to take up courses and attend seminars that are capable of improving their existing knowledge of the use of ICT in teaching, research and office practice. The authors are of the view that, unless ICT is taken seriously through the conscious removal of all possible bottlenecks, the realization of the lofty aims of ICT remains elusive. Thus, the following among others were recommended: there should be the institutionalization of ICT as a course in the department of Business Education for all students so as to enhance the skills, competences and attitudes of the students towards the use of ICT in the society. Business Educators should be encouraged to participate in regular training and retraining ICT programs and seminars so that they could be abreast with existing knowledge on how to apply and maintain ICT in the classroom and office.

Keywords: ICT, Business Education, importance of ICT, impediments of ICT, problem-solving

INTRODUCTION
The unarguable rationale for the increasing inadequacy for the use of Information and Communication Technology (ICT) in the world of education and specifically in Business Education could be predicated on six basic elements; the pedagogic rationale, the social rationale, the catalytic rationale, the vocational rationale, the cost rationale and the ICT rational (Dzansi & Amedzo, 2014). However, even though all of this rationale could be considered highly essential, four basic ideas could be considered pertinent and reasonable for the adoption of ICT in contemporary Business Education programme especially in Nigeria. They are; the pedagogical, the business creation, the skill acquisition and the gaining of knowledge importance.
The concept of ICT is synonymous to computer and computer networks. In contemporary times, it is often regarded as the application of computers and telecommunications equipment to store, retrieve, transmit and manipulate data, often in the context of a business or other educational enterprises. ICT, especially the internet has become a fundamental aspect of the daily business and academic life of selected stakeholders all over the globe. Indeed, it is as a matter of utmost necessity, ameliorating the plight of both business educators and students. Unlike in the olden days when daily living was being overtaken by major life challenges before the advent of ICT; ICT in contemporary times has improved the living standard and wellbeing of the society and its usage has increasingly made the world a better place, considering its huge benefits. The benefits however, may have some unintended consequences, if technology is not well deployed and managed (Ohaka, 2015).

ICT refers to the digital technology used for the gathering, production, storage, processing, manipulation, management, and transmission or reception of information (Ogiagah & Ofule, 2014). ICT is an umbrella term for any communication device or application such as; radio, television, cellular phones, computers and networks, hardware and software, satellite systems as well as various other services. It is an extension term for Information Technology (IT) which emphasizes the role of unified communications and the integration of telecommunications (telephone lines and wireless signals), computers as well as necessary enterprise software, middleware, storage and audio (Nwankwo, 2017).

ICT is very crucial for sustainable development in developing countries like Nigeria. For the past two decades, most developed countries have witnessed significant changes that can be traced to ICT. These multidimensional changes have been observed in almost all aspects of life economics, education, communication and travel. It is indicative that many initiatives have been taken at the international level to support Africa’s effort to develop a communication infrastructure and these efforts are designed to enable African countries, including Nigeria to find faster ways to achieve durable and sustainable development (Ogbono & Ogbono, 2008). ICT is a global network in which ideas are exchanged or information and knowledge are shared, through using communication technology like cell phones, and technology like computers to connect people. It is interesting to note that, on today's information age there is hardly any human activity that is not information driven. ICT obviously permeates all aspects of life, from the workplace to the sport field, in schools and on a personal or social level. To say the least, ICT has become grossly indispensable for all Business Education organisational types (Dzansi & Amedo, 2014).

However, in a nation like Nigeria, the institutionalization of ICT in Business Education program should remain an ongoing concern for stakeholders across board. It should remain a fundamental objective for government at both state and federal levels including the administrators of Education as a program. Similarly, it could then be opined that the application of ICT on the running of Business Education program is essentially pivotal because such professional and dependable initiative, if properly enforced, has the ability to accelerate the speed of data processing and transmission for effective and efficient office procedural practices in Business Education program.

Business Education is an integral part of Vocational Education which is the education for employability. The Federal government of Nigeria recognized it as such and defined it as the aspect of technical education which involves in addition to general education, the study of technologies and related sciences; the acquisition of practical skills, skills attitudes, understanding and knowledge relating to occupation in various sectors of the economy and social life. Unlike the general education which is long in theory and short in fact, Business Education is practical oriented and provides individuals with skills in business-related occupations such as; accounting, marketing and office occupations (Akpomi, 2008; Azuka, Nwosu, Kanu & Agomuo, 2006; Ezeji, Ugwoke, Nathaniel & Okanazu, 2015).

The manifold imperatives for the utilization of ICT for organisational problem solving in Business Education program are overwhelming. This is because, ICT on its part tends to create the room for expanded cum deep finding into the problems that may be confronting the Business Education as an organization. It also provides the lucrative opportunity for mass and rapid inter-connectivity of intellectual ideas and the dissemination of research findings among stakeholders and business educators that are increasingly requisite for problem solving adventure. According to Ogiagah and Ofule (2014), the
business of teaching and learning in Business Education have created a robust relationship with computer technology in a new millennium more than ever before, both in size and in structure. They further argued that Business Education teachers and students now have to depend on the scalability and applicability of technology to enhance their traditional function.

Amidst the observable importance of ICT in Business Education for organisational problem-solving, it is very regrettable to assert that the effective enforcement of ICT is still being greeted by some surmountable challenges which includes; inadequate funding, lack of basic education, epileptic power supply, poor maintenance culture, deployment of substandard ICT facilities, among others. This however, has become a major concern for many stakeholders in relation to the use of ICT in Business Education.

**ICT: Concept and Nature**

ICT is a term that is used to refer to technologies that are used for collecting, sorting, editing and passing on information in various forms. The above definition separates distinct fields of ICT and at the same time, links them together so as to operate as an entity (Kundishora, 2017). Information Technology is the use of manmade tools for collection, generating, communication, recording, re-management and exploitation of information. It includes those applications and commodities, by which information are transferred, recorded, edited, stored, manipulated or disseminated. ICT could also be described as a revolution which has penetrated almost all fields of human activity, thus transforming economic and social life. Even if sustainable economic growth facilitates the creation and diffusion of useful innovations, technology is not only the result of growth but can be used to support growth and development (Ogbomo & Ogbomo, 2008).

ICT is the acquisition, processing, storage and dissemination of vocal, pivotal, textual and numerical information by a micro electronic bases combination of computing and telecommunication. ICT is seen as an information tool that makes the world go round. It is the study of the technology used in handling information, and aiding communication. It could also be referred to as all kinds of electronic system that are used for broadcasting, telecommunications and all kinds of computer mediated communications. Thus, ICT is the study of, collection, retrieval, use, storage and communication of information using computers and microelectronic systems (Shaibu, Oshiogwe & Mbaegbu, 2014).

It may interest you to note that ICT is not just the bloom of educational activities, but also it will be the secondary option to improve the effective and meaningful educational process. ICT is a concept which has strategy as one of its core elements. Mbakwem (2007) saw ICT as a process of creation, processing, storage, retrieval and dissemination of information and data using computers and telecommunications. The main purpose of the strategy in ICT implementation in Business Education is to provide the prospects and trends of integrating ICT into the general educational activities of Business Education (Meenakah, 2013). ICT is the sole creation of human kind that has thrown off balance the conventional perceptions of time and space and has destroyed geographical barriers to the transmission of knowledge, ideas, and information. It is the handling and processing of information which may be in form of graphs, images, texts and instruction and so on for use by menas of electronic and communication devices such as computers, cameras, telephone and others (Obanya, 2003; Ozorji, 2003). Thus, in defining the concept of ICT in the context of modern day Business Education, four (4) major facts are inferable;

**Fact I:** Since ICT is developing very rapidly in contemporary times, the whole system of Business Education should be continually reformed and ICT should be integrated into the educational activities of Business Education in order to balance the trend.

**Fact II:** The impact of ICT in the life of Business Eduactors and Business Education students cannot be downplayed. Therefore, the wide use of internet access is an unavoidable policy that should be anticipated by Business Educators.

**Fact III:** The pace of ICT enforcement in the Business Education should accelerate in rapid and geometric progression. It should remain the priority of Business Education administrators. This calls for active involvement, initiative and goodwill of the schools and the government to enhance the implementation level.
Fact IV: The Business Educators themselves should be the catalysts, main motivators and important initiator of the ICT implementation in the Business Education program by becoming fully informed of the transformations in educational activities happening in the society.

Core Objectives of Information and Communication Technology in Business Education
The following could be considered to be the fundamental objectives of ICT in Business Education enterprise (Ohaka, 2015):
1. To develop distant Business Education with national contents.
2. To develop a system of collecting and disseminating information in Business Education.
3. To encourage the core principles of lifelong learning in skill acquisition and character moulding in Business Education through knowledge and career global interconnectivity.
4. To increase a variety of Business Educational services and avenues.
5. To promote equal opportunities in terms of becoming educated and informed as a stakeholder in Business Education.
6. To accentuate learning culture in Business Education.
7. To advance technology know-how and competence of all players in the discipline of Business Education.
8. To have the explicable capacity to garner useful information and synthesis them proficiently.
9. To rapidly expand the knowledge delivery and data gathering mechanism of scholars in the field of Business Education.

The Concept of Business Education
The concept of Business Education has been perceived to mean a program of study designed to prepare people to be gainfully employed and at the same time encourages the development of skills that are manipulative for being self-employed. This implies that Business Education is that branch of general education that prepares the target audience for employment for office occupation as a whole, distribution and marketing occupations, teaching of business and the understanding of micro and macroeconomic principles. Business Education has a formidable force that equips the individuals with suitable skills, knowledge, attitudes and competencies that will enable them become self-employed and self-reliant which can lead to sustainable economic development (Ohaka, 2007). Akpomi (2008) posited that Business Education is the sum total of the knowledge, skills and attitudes that are required for successful promoting and administering of business enterprises. In the same vein, Ohaka (2017) opined that Business Education is that field of study which deals with the acquisition of lifelong and sustainable skills, gaining of sound knowledge and the development of good attitudes requisite for its recipients to feature professionally and competently both in the educational environment and in the business world.

Business Education is said to be concerned with the area of knowledge and competencies needed by individuals (skills, abilities, understanding and attitudes) that enable students to become worthy human beings and effective members of the society. It prepares learners for the disparate roles in business as economically literate and intelligent citizens. As part of Vocational Education, Business Education appears to be synonymous with skills acquisition. In the absence of paid employment, individuals with vocational skills can establish small businesses within the services needed by their localities and this has the capacity to boost the local economy from within and hence, lead to the liberalisation of the people from the culture of dependence on external assistance. Essentially, skill acquisition, character moulding and knowledge development remains an integral and indispensable element of the Business Education (Akpomi & Ohaka, 2018).

Solving Problems in Business Education via ICT: A Potent Tool
The capacity to manage business and organisational problems in natural Business Education settings via ICT could be seen as one of the most significant competencies of Business Educators. One powerful avenue through which Business Educators can gain this competence is to engage in continuous strategic
problem solving endeavours in real organisational settings. Solving problem strategically in Business Education by Business Educators via ICT can culminate into competencies that are needed to be successful in the fuzzy, ambiguous and politically changed natural context of organisation. Becoming competent in ICT can generate a reach knowledge base which can be used not only to solve specific problems at hand but also as a predicate thereby, developing novel and essential generic knowledge base for solution provision for problem-solving strategies (Aken, Berends & Bij, 2012). Business Education needs staff that are heavily armed with ICT skills which transcends beyond the basics of knowledge development, writing and proficiency in reading so as to be able to tackle head-on great difficulties that may confront the everyday administration of the Business Education programme. These skills may encompass the ability to generate and compute data through ICT for the effective and efficient organisational problem-solving. Indeed, the use of ICT in Business Education as a potent tool gives the Business Educators the opportunity to make a real discrepancy to the success of the programme in no little measure by enabling the programme map out strategic vision for the organisation or tackle a specific problem that the programme may be encountering. However, deploying ICT in Business Education enterprise as a potent tool for problem-solving can solve the following problems (Oxford Creativity Limited, 2017);

1. Uncover a technical problem and fix it
2. Improve scientific testing methods
3. Identify most promising problematic areas for research
4. Develop a novel and improved corporate strategy for problem-solving
5. Develop and improve extant laws governing the programme in general.

ICT in Business Education enhances scientific research and data computation which improves the analytical abilities of Business Education to be able to resolve complex anomalies, protracted challenges and dilemmas that may crop-into the programme at a given point in time by splitting the whole into the sub-parts. It improves hypotheses testing for problem-solving in Business Education generally by Business Educators. According to Armstrong (2011), a problem in Business Education programme cannot be considered to have been solved until decisions have been implemented. As a potent tool for problem solving, ICT in Business Education provides for the easy and effective reorganization of facts and figures and enables the Business Educators collectively resolve complex issues and painful organisational problems.

Deploying ICT in Business Education for problem-solving could also encompass the following ten strategic steps (Armstrong, 2011);

1. Establishment of what has gone wrong or is in the process of getting wrong.
2. Conceptualisation of the anticipated problem to be contained currently or on the future to enable one solve the actual problem or change the circumstance.
3. Hypothesize of the problem
4. Find out what has actually challenged status quo and contrast this with an assessment of what ought to have happened.
5. Determine what is relevant and irrelevant.
6. Identify possible courses of action.
7. Evaluate possible courses of action by assessing the extent to which they are likely to achieve the objectives, the cost of implementation, any practical difficulties that might emerge and the possible reactions of stakeholders.
8. Weigh and decide to be able to determine which alternative is likely to result in the most practical and axiomatic solution to the hitch.
9. Plan to implement the modus-operandi for the problem resolution by also considering the timetable project management resources that are requisite.
The Underlying Principle (Rationale) for ICT Enclosure in Business Education Program
Shaobu, Oshiogwe and Mbaegbu (2014) outlined some of the following as being the rationale for ICT inclusion in Business Education program:

1. Increase in productivity and professional effectiveness through research and development.
2. It is a gateway to vast resources of information or staff and students in the academia.
3. Provision of avenue for the improvement of Business Education outreach and standard across the globe.
4. It serves as a course or programme of study that enhances the abilities and skills of the recipient about problem-solving through globalisation.
5. It is a reliable complement to general educational instruction
6. It serves as a good delivery mechanism for organisational problem-solving in Business Education.
7. It promotes the utilization of conducive learning and teaching environment for the advancement of organisational problem-solving techniques in Business Education.

The integration of ICT in the curriculum of Business Education is considered to be of immense benefit to the programme in terms of containing some of the serious encumbrances that may bedevil it. The exposure to ICT allows learners in Business Education to develop skills and abilities that will give them an edge in the global community, feature competently in an ever increasingly technology-saturated learning and teaching environment and develop the requisite potential needed to proffer solutions to organisational dilemmas. Also, ICT in Business Education allows students to become confident and reliable providers and synthesizers of knowledge according to their ability and opportunity available at their disposal.

Furthermore, learners of Business Education who continue to use ICT to solve their major academic problems may emanate in the cause of them doing their assignments and projects begin to cultivate a culture of personal information management, independent learning and working without supervision, communication skills, team work and research skills which are highly valued in today’s global workforce. Not only does ICT enhance the development of Business Education students it also enhances the development of teaching instruction by the business educators (Mdlongwa, 2012).

Similarly, the use of ICT in Business Education have the capacity to make major discrepancies in the learning of students and the disparate approaches of instruction deployed by the Business Educators to solve complex and difficult teaching tasks. Also, ICT in Business Education comes with a singular belief that ICT contributes to a more constrictivist learning and an increase in problem solving activities and greater responsibility of Business Education students. They can play a considerable and momentous role in teaching practices, school innovation and community services carried out by the Business Education programme (Vlmen in Mikre, 2011). However, three concerns are expressed and considerable as the rationale for ICT in Business Education programme for the identification and solving of organisational problems (Kozma in Mikre, 2011);

1. It props up the teacher and classroom outcomes of Business Educators in terms of the development of their technological skills and knowledge of novel approaches to solving pedagogical problems as well as improve attitudes towards teaching complex and skill subjects.
2. It brings about increased innovativeness in the programme of Business Education.
3. It enhances the learning of novel problem-solving skills in Business Education that are requisite for a developing economy like Nigeria.

Unarguably, ICT could be described as a potent tool that has the capacity to increase the quality of Business Education programme in several aspects which may include (Meenakshi, 2013);

1. Increase the motivation, attitude and engagement of Business Education learners towards problem-solving.
2. Facilitating of the acquisition of organisational problem-solving skills.
3. Enhancing of teacher training skills.
4. Being a transformational tool which when used appropriately, can promote the shift to a learner-centered environment. ICT such as videos, television and multimedia computer software that combine text sound and colourful moving images can be used to provide challenging and authentic content that will engage the Business Education students in the teaching learning process. Thus, there are five levels of technology use in Business Education for organisational problem-solving. They are; presentation, demonstration, drill and practice, interaction and collaboration.

Troubles of ICT usage in Business Education Program

The process of using ICT in the daily activities of Business Education program cannot be totally exonerated from some observable controllable and uncontrollable troubles. According to Salehi and Salehi (2012), such troubles usually emanates from the complex and complicated nature of the use of ICT in Business Education. There are number of difficulties which acts as troubles and tend to prevent Business Educators from integrating ICT in Business Education program. These problems make it cumbersome for the effective utilisation of ICT in Business Education program. Thus, the troubles (impediment) to ICT implementation in Business Education program could be generally classified into: intrinsic and extrinsic troubles, teacher-level and school-level troubles, micro, meso and macro level troubles and material and non-material conditions.

1. Intrinsic and Extrinsic Troubles: The extrinsic troubles are first order and they may include; access, time, support, resources and training. The intrinsic troubles are second order and they involve; attitudes, beliefs, practices and resistance. The extrinsic troubles are related to organizations rather than the individual Business Educators and Business Education administrators and individuals (Al-Alwani, 2005; Salehi & Salehi, 2012).

2. Teacher-level and Schools-level Troubles: The teacher-level troubles include; lack of confidence, shortage of time, and resistance to transformation, or to instruction. The school-level troubles involve; lack of effective training in solving technical problems and lack of access to resources.

3. Micro, Meso and Macro Level Troubles: The micro level troubles are those related to the Business Educator’s attitude and approaches to ICT. While the Meso level troubles are those that relate to institutional context. The Macro level troubles are those related to the broader Business Education framework (Balanskat, Blamire & Kefala, 2006).

4. Material and Non-material conditions: The material conditions are the insufficient number of computers or copies of software. The non-material troubles refer to the Business Educator’s insufficient ICT knowledge and skills, the difficulty of integrating ICT into instruction and insufficient teacher time (Salehi & Salehi, 2012).

Generally, the introduction of ICT in the programme of Business Education has been hindered by; lack of knowledge and skill, lack of time, lack of equipment, poor maintenance culture, internet accessibility and insufficient funds. However, in the program of Business Education as practiced in Nigeria today, the following could be considered as being the possible elements troubling the effective and efficient utilisation of ICT. They include but not limited to;

1. Insufficient number of computers
2. Lack of free time for learning and professional development
3. Lack of classroom time for students to use the computers
4. Unavailability of up-to-date computers and reliable computers
5. Lack of personal/self confidence
6. Teachers' resistant attitude to change which is dynamic
7. Lack of awareness of the cons of using ICT
8. Lack of time to explore technologies such as the internet
CONCLUSIONS
ICT is a concept that is gathering rapid momentum in the contemporary educational scheme. The phenomenon of ICT in Business Education has to do with the avenue via which data is assembled for the purpose of information analysis and synthesis for an organised and professional office practice and complete classroom Business Education teaching effectiveness. There is the dire need for a continuous appraisal and reappraisal of the degree of ICT utilization in Business Education taking constant due cognizance of its level of implementation. The use of ICT in Business Education will remain grossly beneficial to the program considering the indomitable and proven assertion that it has the potency to ameliorate some of the numerous problems bedeviling it. However, if effectively and efficiently used, ICT will continue to serve as a productive veritable tool for organisational problem-solving in Business Education. Therefore, ICT as it is utilized today should be taken seriously through the conscious removal of all possible bottlenecks towards the realisation of the lofty aims of ICT in Business Education.

RECOMMENDATIONS
The following are recommended;
1. Business Educators and administrators in Business Education program should see to it that they work out realistic modalities on how to improve the existing maintenance culture existing amongst the Business Education program. This singular act will obviously help to prolong the life span of the technologies for better productivity.
2. Due to high cost and inaccessibility of some of the major ICTs by the Business Educators and students, there should be in place some financial schemes where Business Education stakeholders like the Business Educators and students could readily access softs loans that can enable them possess their own computers and pay back on a fixed payment structure. This will give them the financial ability to own and use their own ICT tools confidently.
3. Business Educators should be encouraged to participate in regular training and retraining ICT programs so they could continue to update their existing knowledge on how to apply and maintain ICT in the classroom and office.
4. The administrators and policy makers of Business Education program should allocate more time and other resources to the practice and use of ICT by the students during the day’ s teaching-learning endeavour in Business Education. This will aid in accentuating the mastery of the basic knowledge and skills of ICT utilization by the students of Business Education.
5. There should be the institutionalisation of ICT as a course in the department of Business Education for all students so as to develop the skills, competences and attitudes of the students towards the use of ICT in the society.

REFERENCES


