

# EDUCATIONAL TECHNOLOGY AND GRADUATE EMPLOYABILITY IN THE 21<sup>ST</sup> CENTURY: PROSPECTS, CHALLENGES AND RECOMMENDATIONS

By

**INIODU, FUMNANYA ONYEKA**

*Faculty of Education,  
Federal University of Lafia, Nasarawa State.  
onyix28@gmail.com/07037728771*

## **Abstract**

*The 21<sup>st</sup> century emerged with advanced and increased use of new technologies which have become commonplace in our institutions nationwide. With these emerging technologies, employers approved certain criteria and requirements for recruiting graduates into their organizations. In Nigeria, institutions that require the services of graduates with competent skills in Educational Technology (ET) have realized that most graduates in ET fall short of this expectations. These graduates are neither abreast with the new technological inventions in the field nor have the practical skills and knowledge to enable them gain employment. This paper highlights prospects of ET which includes improves educational standard, facilitates and develops performance and enhance computer skills. The researcher explored amongst others the challenges ET graduates face in gaining employment which includes lack of employability skill, poor budget allocation/ planning, lack of professional educators in ET and lack of internet services. In addition, strategies were recommended to tackle the highlighted challenges which includes, but not limited to increase in government allocation, the use of certain technique/teaching methods, accessibility and effective use to technologies by educators and undergraduate self-development.*

**Keywords:** *Educational Technology (ET), Graduate employability, Prospects, challenges and Recommendation.*

## **Introduction**

The technological innovations in the 21<sup>st</sup> century cut across numerous fields in which educational technology (ET) is not left out. These innovations particularly the invention of different ET tools and applications have greatly impacted the process of teaching and learning in the educational system. Its integration into the educational curriculum produces graduates with technological and employability skills suitable for employment and reshaping any institution (institution for this paper implies any companies, industries, private, public and non-profitable sector).

Unfortunately, employers have realized that graduates of ET are not competent enough to handle these 21<sup>st</sup> century ET tools despite having a degree which makes them unemployable. Akanmu

(2011) opines that products of the Nigerian University system have at different forum been challenged to test their suitability or otherwise to secure few available white collar jobs. Higher education institutions have been criticized for their mode of training as this has little or no relevance to the social and economic needs of their countries (Rufai, Bakar & Rashid 2015) which consequently leads to the production of unemployable graduates. Many graduates who find work are not gainfully employed, and for those who found fulfilling employment in spite of everything, their employers raised serious concerns about their skills for the job (Akanmu, 2011). Similarly, the studies of Pitan and Adedeji (2012) revealed an overall skills mismatch of 60.6 percent among employed university graduates, with critical deficiencies in communication, information technology, decision-making, critical thinking, interpersonal relationship, entrepreneurial, technical and numeracy skills. Indications from past studies show that the high rate of unemployment experienced by university graduates is not only as a result of the unavailability of jobs, but also because of a dearth of candidates with employable skills that employers are looking for in Nigeria (Pitan, 2015). Evidence in support of this assertion shows that out of over 40 million unemployed youths in the country 23 million are unemployable possibly due to their lack of necessary skills for employment (Emeh, Nwanguma & Abaroh 2012). The results of this study were consistent with other similar studies such as those by the National Universities Commission (NUC, 2004) and Phillips Consulting (2014). The extent of mismatch as revealed in these studies further supported the fact that many of the university graduates in Nigeria were unemployable.

The growth of ET has the potentials to transform the standard of the educational system and other institutions in Nigeria at all levels. Thus, the importance of ET in the institutions cannot be over emphasized. Before going further in defining Educational Technology, we need to acquaint ourselves with what Educational Technology entails. Preparing today for tomorrow, the

educational technology plan for the future of students' by supporting the acquisition of knowledge in the content area, development and application of lifelong skills and preparation for success in the 21st century. According to Mustapha and Abdulrahman (2015), the twenty-first century workforce is expected to be prepared for a global experience that is burdened with complex workplace relationships and demands.

Unemployment is threatened by the invention of new technologies in the 21<sup>st</sup> century which is accompanied with diverse employment opportunities and an increased need for graduates in ET but unfortunately, the expectation of employers took a nose dive with the quality of graduate in ET. Educational technologies are getting more and more intricate and the need for professional care is becoming imperative (Idris, Saba & Mustapha, 2014).

In view of the unemployability of graduates in ET, this paper will serve to discuss the prospects of ET, challenges of unemployability of graduates in ET and also proffer recommendations to the challenges.

## **PROSPECTS OF EDUCATIONAL TECHNOLOGY**

Every institution if not all are fully enlightened with ET. ET as a profession create a wide variety of careers in public, private or higher education, government agencies, corporate, private and non-profit sectors.

1. **Technological Application:** ET entails the use of diverse technological applications to solve problems and develop any institution. Educational Technologist have a sense of embodiment and possibility for interacting and integrating technologies to support the learning process, make learning easy, increase learner interest and productivity. Kronholz (2011) stated that ET enables integration of modern technologies to improve interaction between students and instructors. Also, for teachers, it's relatively easy to create learning environments that resemble

traditional classroom approach including the option to use PowerPoint presentations or web sites such as: Wikipedia, YouTube, Flickr or Facebook to deliver content in a distant mode (Thomas & Knezek, 2008). Experts in technical writing must be conversant with ET applications because their job include the use of digital means to prepare written information ranging from instruction manuals, career guides and journal articles among other informational documents. They work in various institutions (both public and private) as administrators and also disseminate information through various channels of communication (Careerherd, 2019).

2. **Develops and facilitates performance:** Educational Technologist use different technologies to develop applications and proffer strategies based on the situational problem for optimal performance, growth and improvement of facilities to achieve their goals. For effective performance of facilities and services, educational technologists make use of information technology. According to Ahmadi (cited in Ebrahim & Somayeh, 2013) information technology (IT) is necessary in public and non-profit organizations to establish the national information system, create and increase scientific aspects and develop the economic and social sector in order to reduce human error. A further potential aspect of educational technology in the 21st century is its ability to increase the active role of all learners, which can lead to higher motivation and shared responsibility in an iterative process aimed at achieving common goals in an efficient collaborative way (Merrill, 2003).
3. **Enhance computer skills:** The constant development of ET gave rise to diverse ET tools one of which is computer assisted instruction (CAI). CAI is an instructional tool that promotes the learners' computer skills. According to Ronghuai, Micheal and Junfeng (2019) CAI is characterized as one-to-one interaction between a computer system and a student; the system elicits responses from a student and provides feedback, and allowing students to proceed at

their own pace. The use of computers gives student practice on core content and skills which enables individualized education and allows students to master and work at their own pace (Massom, 2014 & Dalsgaard, 2013, Ahmed, 2010).

4. **Improves educational standard:** Specialist in ET are organized with proficiency in technology and in their process of education delivery. Their proficiency in technology makes it easy to effectively use ET tools and applications to provide every learners with quality education and allows for the continual improvement in the standard of education. The ET field comprises of variety of careers, some of which includes instructional coordinator, educational consultants and learning management system (LMS) and learning content management system (LCMS) administrators. Some of the task of ET professionals also includes research on the newest trends, tools and resources to train and facilitate the use of ET tools, collaborate with professionals in the field of education to meet learners' needs and oversee the modification and implementation of curriculum as well as evaluate its effectiveness (Careerherd, 2019).
5. **Research Skills:** The emerging knowledge economy is one that requires individuals with creativity and ability to develop, find and synthesize new knowledge (Breen, Brew, Jenkins & Lindsay 2003). Graduate from ET have proficiency not only in the field but have a proper and structural method in promoting independent search of new knowledge, learning more innovative techniques and procedures on how to analyze information flow. These skills if well utilized give graduates ability to discover problems, experiment and inquiry on ways or idea to solve the problem in order to achieve the set goals of an institution.

## **CHALLENGES OF GRADUATE EMPLOYABILITY IN THE FIELD OF EDUCATIONAL TECHNOLOGY 21<sup>st</sup> CENTURY**

- 1. Lack of quality education:** Technology is trendy but there is still inadequate manpower to get the ball rolling simply because graduates of the 21<sup>st</sup> century lack the necessary skills needed. According to Akanmu (2011), the products of the Nigerian University system have at different fora been challenged to test their suitability or otherwise to secure few available white collar jobs. He went further to say that the situation is not only sympathetic but embarrassing that the vast human material resources available to the country had not been trained and utilized to the advantage of the country. De la Harpe, Radloff & Wyber (2000) suggested that there is concern worldwide that existing undergraduate programmes are not producing graduates with the kind of life-long learning skills and professional skills which they need in order to be successful in their careers. The existing quality of education system is alarming because graduates do not sufficiently understand the basic concept (internet, learning techniques, virtual lab, computer languages), they lack in-depth understanding and skills on how to function with the new technologies which has caused a gap between graduate for employment and employers in various institutions.
- 2. Wrong perception on the use of ET tools:** It is obvious that ET have experience changes in the 21<sup>st</sup> century and these changes are happening in an accelerating pace but most graduates with wrong perceptions of technology find it difficult to use and function properly with both the existing and present ET tools which eventually results in their inability to secure a place in the labour market.
- 3. Lack of professional educators:** One of the most immediate problems facing the ET profession is the shortage of educators. Educational technology is getting more and more

intricate and the need for professionals is becoming imperative (Idris, Saba & Mustapha, 2014). The shortage of qualified ET educators for our university programs is a major deterrent to the progress of graduate employability. The absence of professional teachers in ET has given rise to half-baked graduates who are unable to confidentially sell their knowledge and skills to any institution. Apart from the fact that there is shortage of ET staff in the Nigerian institutions, most of the available ET tools are underutilized due to the absence of experts. This further stems from the fact that funds are not being allocated to train and retrain educators in this field. According to Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur (2012), the most commonly cited reason for lack of technology implementation in the classroom is inadequate professional development and training. Countless new technologies will be developed during their teaching careers, and they will need to undergo additional training to keep their skills current. The result of these setbacks limits educators to proffer an effectively teaching and learning process. Consequently, graduates from these institutions will lack the attributes needed for them to be employed.

4. **Lack of employability skills:** The innovations of technology in the 21<sup>st</sup> century have created vacancies for graduates to be employed but employers who seek the services of graduates in ET have realized that these graduates do not have the required skills for the job. According to Mustapha and Abdultahman, (2015), the impact of globalization, knowledge, economy, industry upgrade and rapid changes in workforces, college graduates today need to possess the employability skills so that they can meet today's complex workplace demands; and they should be able to demonstrate these skills prior to their graduation. Graduates who lack employability and soft skills even with their certificate find it hard to acquire a job in their field. Employers agreed that employability skill is important to be acquired by their employees to be outstanding in their field (Nishad, 2013). He also discovered that educational technology

graduates have mastered their technical skill but employers feel dissatisfied of their employees because they lack motivation, communication, interpersonal, critical thinking, problem solving and entrepreneurship skills because these skills are enabling skills which are competencies allowing an individual to do things right and play a significant part in a working environment (Commonwealth of Australia, 2006).

5. **Poor implementation of ET tools in classrooms:** There exists an established criticism on the mode of teaching and learning as it is opined that it has little relevance to the development of a country (Rufai et al, 2015). The ET field requires a constant use of internet services in order to apply the latest ET tools to their teachings but most educational institutions rarely have internet service to implement the use of the ET tools in the classrooms. Wozney, Venkatesh, & Abrami (2006) found that one of the two strongest predictors of teachers' technology use was confidence in achieving instructional goals using technology. Without the necessary resources to provide continuous technological training, schools and districts will continue to cite inadequate professional development as a major barrier to technology implementation. For a graduate to effectively gain employment in any institution, they have to be acquainted on how ET tools are implemented in order to stay on top in the field in the technological world. Where graduate exhibit the inability to implement technology in achieving the goals of its institution, their services will not be required.
6. **Poor budget allocation/planning:** In this 21<sup>st</sup> century many institutions seek to battles for supremacy in diverse ways, but one of the challenges they encounter in their quest to come out the best is as a result of low educational budget allocation. The United Nations recommends 26% of the national budget for education. However, Nigeria has not been able to achieve this bench mark. This has translated into poor institutional planning, lack of training, inadequate provision of ET equipment and internet services which in turn affects the standard of education.

This apart, appropriate design of ET centres becomes obsolete which further reduces the quality of graduates thereby making them unfit to be employed.

7. **Poor Curriculum Development:** The Nigerian university curriculum, just as the curricula of many other developing countries, has been criticized for not only lacking in content and quality, but also for being largely theoretical and overloaded, obsolete and disconnected from the labor market and therefore, inadequate to attend to the needs of the 21<sup>st</sup> century students (Bamiro, Adedeji & Pitan 2013). It is imperative that ET courses comply with standards relevant to the future and where there is a failure to modify and remodel ET curriculum, the attempt to attain the goal of producing graduates with vast technological and employability skills will be impossible.
8. **Lack of internet services:** For the effective use of ET tools, the internet service is very vital. Experts in ET use internet in their instructions in order to obtain and apply the latest information available. The lack of internet service in the educational system makes it difficult to practical demonstrate and teach students how to comfortable use the ET tools. When graduate do not have proficiency in the use of internet to use certain applications, their qualification will not be relevant to the field of ET.
9. **Poor commitment of undergraduates to developing themselves:** The reality of the labor market is that it is becoming more competitive and congested as many more graduates enter it. University students do not understand this fact and as a result do not add value to their credentials (while in the university) in order to have a better chance to compete. For example, Kinash et al (2015) found out that it is often too late before many of the undergraduates realize the need for employability services.

## **CONCLUSION**

In conclusion, for Nigeria to actualize a high level of productivity of graduate employability in the field of ET, higher institutions must expose their students to practical, technological and employability skills in order to possess adequate skills to make the outstanding in their field and also meet up with the demands of employers.

In view of the above, Nigerian Government, agencies and higher institutions should review the curriculum and make funds available to equip facilities in ET and train lecturer on the use of the technologies and appropriate teaching methodologies for a smooth transition to graduate into the workforce.

## **RECOMMENDATIONS**

Based on the above discussions, the researcher proffered the following recommendations which includes;

1. The budget allocation and funding for the educational system should be increased so as to carter for technology lapses in the university system, increase the number of staff training and development.
2. Government should increase the wages of educators in the University system so as to enable them have a continuous update in form of seminars, conferences and workshop on of ET and also make the field lucrative and attractive for the upcoming educators.
3. The National University Commission (NUC) should have ET administrators or expert who will supervise the accreditation of ET programmes in the various university in for quality control and sustainability in the field.
4. The University system should work alongside with ET experts to develop the course content in the ET curriculum. The content of the curriculum should be designed to

incorporate the components of employability in their teaching method. It should also be modified to accept the use of the 21<sup>st</sup> century ET tools, include student placement apart from internship to improve their technical/practical and employability skills and teaching should mostly be skilled based and not only theoretical.

5. The University system should employ qualified experts in ET who have experience in the use of the 21<sup>st</sup> century technologies to enable continuous movement of the profession instead of having the programs either closed or staffed by unqualified teachers.
6. The University system should introduce ET programme at the degree level in all universities to not only create awareness of its importance to the university system but also increase the number of professionals in ET with skills that will meet up with the intellectual demands in variety of sittings.
7. The University system should make ET a department on its own for effective integration of technology and for it to realize its potential in due time.

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