

MAJOR ICT SKILLS REQUIRED FOR EFFECTIVE TEACHING AND LEARNING OF HISTORY OF EDUCATION IN NIGERIA'S TERTIARY INSTITUTIONS

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Abstract

The primary focus of this paper is to discuss the key skills of the ICT (Information and Communications Technology) whose acquisitions could enhance the activities of teaching and learning of History of Education in Nigeria's tertiary institutions. Decision to embark on this project is considered crucial because of the phenomenal functions which the infrastructures of this huge industry have continued to play in the various sectors of human capacity development, most especially in the areas of education where various nations of the world have found them highly quintessential and irreplaceable. Among global nations therefore, adaptation of various facilities of the ICT has made elaborate impacts on national development, most especially in the education sector where teachers and learners benefited immensely. The fact then remains that at this stage in Nigeria's development, there is dire need to equip the entirety of the nation's tertiary institutions with relevant ICT-related educational which could assist teachers and learners acquire the skills-based professional capabilities which this industry offers at this period of national development. Against this background therefore, it is without doubt that the acquisition of such skills could go a long way in aiding the nation wriggle out of the numerous challenges which have posed severe obstacles to development and youth empowerment. Conceded that several of Nigeria's tertiary establishments are lagging behind in the availability of the numerous infrastructures of this huge industry therefore, it is the target of this paper therefore to present a discourse on some of the major skills which teachers and students in tertiary establishments require for effective teaching and learning at school.

Keywords: History of Education, ICT, Learning, Skills, Teaching and Learning, Tertiary Establishments

Introduction

Nigeria counts among the nations of the developing world where the facilities of the ICT industry are still conceded as rare luxuries relevant for effective teaching and learning in tertiary institutions. The country stands out boldly

among the nations of the globe where governmental investments in the education sector are often turned into issues of political debate. Even in the 21st century when several countries of the globe invest hugely in the infrastructural emancipation of their tertiary establishments, the

Nigerian government and her numerous political power brokers and political heavyweights trivialize this critical subject of national development, and rather convert it into some issue of ethnic debate, all with the targets of underplaying the need for functional education in schools all over the country.

In this 21st century digital era, it is quite sickening to place on record that larger percentage of Nigeria's educational establishments, most importantly those at the tertiary cadre lacks the relevant facilities of the ICT industry. It is even more challenging to admit that majority of teachers and students in these educational establishments are analogous and incapable of exhibiting any skills of this encompassing global industry. Supported with the facilities of the ICT therefore, most especially those that have been carefully designed and adapted to function as tools of school education, abundant opportunities of enhancing the qualities of teaching and learning could be attained. Classroom education could become more creative, skills-based, and individual driven. At the same time too, teachers and learners could be guided to acquire additional skills and professional abilities which could enhance their earning capacities, save them from distressing financial pressures from family and friends, as well as empower them with the abilities to escape poverty and severe economic crunch (Akaakohol, & Awaan, 2013; Odo, 2015).

The fact remains that the invention computer and rapid expansion of the ICT infrastructures in the last quarter of the last century, the entire globe is being gradually and systematically digitalized. The education sector has recorded rapid adaptation of several of the facilities of this global electronic industry into educational aids. In the areas of science and technology, similar inventions and expansions have been recorded too. Even in the industrial sector, business management areas, accounting activities, medical and pharmaceutical sectors, areas of engineering, as well as the construction sectors, among others, have all recorded the impact of this huge industry. It is without doubt then that computers, electronic printing machines, laptops, audio visual screens, digital cameras, digital audio recorders, scanning devices, card readers, overhead projectors, video

cameras, android mobile phones, IPADs, electronic calculating machines, close circuit cameras, flat screen television sets, noise-proof generators, electronic boards, electronic recorders, audio-visual recorders, satellite facilities, and other similar inventions of the 21st century have impacted infrastructural developments at this modern time (Danbatta, 2017; Iwunna, Ujah, Dimonye, & Nkwocha, 2022).

It is quite on record that since the invention of these 21st century electronic devices, the globe has encountered tremendous technological expansion, impacted national and international security, improved food production, created varieties of jobs, and impacted the tackling of unemployment which has attempted to cripple Nigeria's growth and national security. The birth of this industry reduced loss of human labour, maximized time consumption, created opportunities for additional skills acquisitions and armed citizens with the capacities to become self-reliant, self-employed and economically dependent citizens. Keeping these at the background therefore, there is every need for the Nigerian government to join the comity of global nations and begin to invest conscientiously in the infrastructural development of her educational institutions, most especially the tertiary establishments. This could go a long way in equipping Nigerians with the abilities to contribute positively to national development, and refuse to be enrolled into the endlessly lists of unemployed and unskilled countrymen and women in search of unavailable jobs and daily meals for themselves and family members (Wuana, & Iyav, 2013; Okorosaye-Orubite, 2016).

Against this background therefore, it can be observed with regrets that Nigeria's education sector has suffered severe misappropriations since years past. The indication is that inadequate budgetary allocations are consistently allocated to this crucial sector of the economy in-charge of producing the country's leaders, training the children and youth, securing the nation and training the trainers of the nation's workforce, among several others. Denied of appropriate budgetary allocations therefore, the country's education ministries continue to struggle to

survive under some difficult conditions. The implication is that schools become poorly equipped with crucial educational infrastructures, which in this case includes the facilities of the ICT industry. Teachers become poorly paid, while young learners roam the streets in search of unavailable job opportunities. At that, majority of school graduates are unskilled, unemployed and unable to fend for themselves and families years after graduation (Akaakohol, Awaan, 2013; Wuana, &Iyav; 2013; Danbatta, 2017).

Put into context therefore, there arises the need to equip Nigeria's educational institutions, and most importantly the tertiary levels, with the necessary infrastructures of the ICT that could enhance the qualities of teaching and learning which are conducted therein. To that end, there is the dire need to ensure teachers and students are adequately empowered with relevant tools they require to function effectively at school and out-of-school. That being the case therefore, the government really needs to wake up to her responsibilities to the citizens through the provision of functional education to young learners and their teachers at school. By that, the qualities of education provided and received in schools all over the country could improve dramatically and be able to support citizens contribute positively to national development.

The following concepts guided the better understanding of this discussion. To that end, the opinions of a few authors were adapted.

Concept of Teaching and Learning

Both terms constitute major educational activities which are conducted in school classrooms. While the teacher engages his professional training in the activities of teaching young learners, students play the functions of recipients of the learning process. Based on this understanding, Depaepe et al (2000) concede the teacher as the manager of the entire classroom process, while students operate as receptors of the items taught. Indicatively therefore, the activities of teaching and learning can never be completed without the engagement of teachers and learners who constitute key partners in the entire process.

Concept of Tertiary Establishments

Nigeria's National Policy on Education (2014)

defines the this educational level as “the education given after Post Basic Education in institutions such as universities and inter-university centres such as the Nigerian French Language Village, Nigerian Arabic Language Village, National Institute of Nigerian languages, institutions such as Innovation Enterprise Institutions (IEIs), and Colleges of Education, Monotechnics, Polytechnics, and other specialized institutions such as Colleges of Agriculture, Schools of Health Technology and the National Teachers' Institutes (NTI)”. By implication therefore, this level of education provides opportunities of further education for qualified post-secondary school leavers.

Concept of the ICT

In the opinion of Ayo (2002) in Odo (2015), this concept makes reference to “the acquisition, processing, storage and dissemination of vocal, textual, pictorial and numerical information by a microelectronics-based combination of computer systems and telecommunication equipment in information process”. This is an indication that the facilities and multi-dimensional functions of the ICT are simply inexhaustible and cannot be counted with the bare fingers of the hands. The implication is that this huge industry is able and capable of providing jobs to millions of Nigeria's unemployed youth. Unfortunately, ability to acquire the required skills continues to pose severe challenges.

Major ICT Skills

The major ICT-related skills needed for the effective teaching and learning of History of Education as a study programme in Nigeria's tertiary institutions shall be briefly discussed under the following subheadings:

Computer Operation

Computer operation refers to the ability to run or operate a computer, laptop, IPAD, or Android mobile phone successfully without the guidance of an assistant. This is also known as computer literacy. Considering the intricate activities demanded in the course of the operation, one' ability to handle these ICT facilities effectively, and be able to familiarize one's fingers with the manipulative processes needed for the effective delivery of results are attestations to the ability to

operate these computer-related gadgets. In which case, one could be said to be computer literate if he or she is able to operate a computer successfully in search of important data without relying purely on the assistance of others. By implication therefore, the moment one acquires the ability to manipulate a computer, perform the numerous tasks demanded, store information correctly, retrieve information accurately, and be able to use the computer to perform multiple functions without reverting to the traditional methods of information and data handling, such a person could be conceptualized to be computer literate (Pember, & Humbe, 2013; Danbatta, 2017).

For teachers and students of History of Education in tertiary establishments in Nigeria therefore, the effective execution of these technology-based activities is crucial for successful academic exploits. Ability to perform the above mentioned tasks effectively enhances their abilities to conduct strong scientific research activities on major historic issues, store relevant data accurately, retrieve same conveniently, and analyze them effectively. Most importantly, ability to perform these technology-based and computer-assisted tasks equip them with additional skills which is completely detached from the traditional methods of storing research data on dirty and unkempt office files and rickety notebooks which corrode with the passage of time (Odo, 2015; Omolewa, 2001).

Hardware Maintenance

The invention of the digital era has also resulted to the evolution of the hardware industry. That being the case, Nigerians now invests their time and talents in the acquisition of technical knowledge on the maintenance of assorted brands of ICT-related hardware products. It is without doubt then that arrival of the computer era launched countless numbers of citizens to train as hardware engineers, maintenance officers, electronic technicians, and computer technicians, among several others. The implication is that the ICT industry challenged countless millions of Nigerian youth who were formerly unemployed to find lucrative career openings for themselves in various arms of this booming technology-based profession (Danbatta, 2017).

The fact remains that millions of Nigerian youth who were formerly unemployed received technical trained in the servicing, installation and maintenance of various ICT infrastructures which include computers, laptops, electronic keyboards, IPADs, photocopiers and printers. For several others, their interests went to the areas of handling other ICT infrastructures, which include internet servicing and installations, video cameras, close circuit television cameras (CCTV), conduit wiring, wireless internal communications devices, power generators, video-assisted security cameras, scanning machines, UPS devices, air conditioning units etc. In the new millennium, ability to acquire these technology-based skills have impacted the quality of education teachers impart in History of Education sessions, armed them with extra skills, empowered them with the capacities to earn more income, and supported their families escape poverty and economic hardship, most especially in the current time when inflation, kidnaping for ransom, and armed banditry keep Nigerians hungry and poverty-stricken (Akaakohol, & Avaan, 2013; Danbatta, 2017).

Filming and Photography

More than any other period in human history, the digital era of the present times has produced more professionals in the filming and photography professions. This period has produced huge number of Nigerian youth and formerly unemployed persons who take to the camera and make successful lucrative living out of it. While majority of them train in tertiary institutions, others acquired theirs through years of tutelage under the guidance of a seasoned professional. It is in consideration of these factors that Nigeria today stands out as the country with the highest numbers of artists, musicians, and entertainers of all sorts.

The implication is that the complicated processes which were formerly involved in the production of musical films and other related products have been simplified following the involvement of a huge percentage of the country's population of unemployed youth in this sector of the nation's economy. Based on this understanding then, Osuala (2004) maintains the position that Nigerians are a breed of people who are always

determined to forge ahead despite business challenges, innovativeness and creativity, team work, commitment, good human relations, ability to set achievable goals, ability to take risks, as well as being dynamic in business approach. On the strength of these factors, it is quite obvious then that the adaptation of pictorials obtained through the activities of filming and photography into the teaching and learning of History of Education in tertiary institutions could go a long way in boosting the quality of education imparted to learners by their teachers (Iwunna, Okoro, Ari, & Nwokeji, 2018; Ezeobi, Ndubuaku, & Nwosu, 2021).

Website Designing Career

Website designing using the tool of the computer and the facilities of the internet constitutes another professional career where teachers and students of History of Education can make lucrative incomes and enhance the capacity of their wallets. Using the tool of the computer, these categories of Nigerian youth could paint images of the country's founding fathers, heroes of our land, major landmarks in the country, the national flag, the distinguishing traits of the different Nigerian ethnic nations, as well as other iconic history makers who have contributed immensely to national development. With the aid of the electronic facilities of the ICT industry too, assorted works of arts, which include major bridges, road construction projects, national monuments, and other epoch making artworks could be produced and displayed in offices, public spaces, or even adapted as tools of classroom education. Remarkably, talented persons who desire to make careers out of this profession position themselves comfortably to earn extra incomes, escape poverty, and keep regular food on the dinner tables of their families (Danbatta, 2017; Osuagwu, 2020). As a matter of fact, students who make careers out of this highly lucrative profession after graduation from school usually become job creators and employers of labour shortly after passing out. This goes a long way in reducing poverty and unemployment among the country's youth and unemployed persons.

Internet Browsing Skills

Sourcing of data from the internet constitutes another major of professional development which

teachers and students of the History of Education could key into. As a matter of fact, extra professional skills are required to be able to browse on the internet and be able to discover the location of some particular documents desperately needed for research purposes. Ability to wriggle through the internet in search of a particular document requires some level of professionalism on the part of the browser, extra time to peruse through the worldwide web (www), and additional data required to cover the space of time required to complete the search. However, these require the availability of the relevant ICT facilities necessary to conduct a meaningful browsing activity, which include the computer, android mobile phone, an IPAD, digital camera, scanning machines, electronic printers, electronic recorders, etc. In the recent time however, some disgruntled Nigerians seemed to abuse the relevance of the www as a convergence of global data, and have converted the platform as a medium to defraud unsuspecting clients. This is known as “yahoo-yahoo” or cyber crime in the local parlance. This has in the recent times dented the country's image in the comity of world nations (Danbatta, 2017; Chukwu, Olaitan, & Omeje, 2018; Onuoha, 2010).

Notwithstanding, law abiding Nigerians have resiliently continued to invest in this sector of the national economy – all with the targets of fighting poverty and hunger in the land. With these entrepreneurial spirit in place therefore, investments in the telecommunications sector has played pivotal roles in keeping food on the tables of citizens, pulled them away from unemployment and dire economic hardship, and converted them into entrepreneurs and creators of jobs for other Nigerians. There is no doubt therefore that teachers and students of History of Education in the country benefit immensely from this sector thereby arming themselves with added skills which eluded them over the years (Akaakohol, & Awaan, 2013).

Internet Installations

Getting the computer, laptop, Android mobile phones, or IPAD etc. hooked on to the internet requires the installation of special lines – known as internet lines. It is from these lines which are usually connected to the national grid that the

services of the internet are drawn, while the user then gains an uninterrupted access to the global network. However, with the relentless expansion in this industry in Nigeria and globally since the past couple of years, the protocols associated with the installation of internet lines in homes and offices seem to be winding down. Users now procure various brands of internet modems, load them with data, and deploy them as launching pads onto the internet. The device has become so much popular that clients now use them anywhere and at any time, just at their own conveniences. This explains how far Nigerians, including teachers and learners of History of Education have gone in the match towards joining the global community to tap from the numerous benefit associated with the facilities of the ICT industry in the recent times (Danbatta, 2017; Odo, 2015).

Computer Software Development

Recent developments in the ICT industry in Nigeria confirm that Nigerians have started engaging in the development and production of computer software programmes locally. To that end, concerted engagements and financial investments are being directed in the areas of training fellow citizens acquire the technological abilities to produce computer programmes and packages needed for the smooth operationalization of various ICT-related infrastructures, required by firms and the industrial sectors of the national economy. At that, this multimillion dollar industry has recorded a number of Nigerian engineers and entrepreneurs who invested liquid cash in the empowerment of engineers and other graduates of tertiary establishments in the production and development of computer software programmes. Without doubt, investments in this sector has also contributed immensely in fighting against joblessness among the country's youth, and has impacted the professionalization of citizens who were formerly unemployed, impoverished and unable to withstand the harsh economic realities facing the country (Umeh, 2020).

ICT Accessories Marketing

Marketing of ICT-related materials and accessories is another sector of the nation's economy which has recorded massive expansion since the past years. As an entrepreneurial nation

made up of citizens who are eager to risk their resources in the quest to succeed and survive, this sector has offered jobs to millions of countrymen and women who operate as foot soldiers in various towns and cities of the country seeking for patronage and soliciting for market slots in the country's economy. These foot soldiers traverse from city to city with their various ICT products at hand or in the boots of their cars, soliciting for patronage from firms, industries, and manufacturers scattered all over the country. Some of the products marketed range from generators to computer accessories, electronic gadgets to security equipment, and medical facilities to educational apparatus. Most often, their prices are more affordable than their counterparts displayed in shops and warehouses. As a matter of fact therefore, Nigerians often patronize them more. Remarkably, teachers and students in tertiary establishments have found jobs for themselves in this sector, increased the capacities of their earning powers, and spared themselves from undue dependence on the traditional single salary system which is prone to poverty, hunger, and economic disequilibrium (Akaakohol, & Awaan, 2013).

Surveillance and Security Services

The ICT industry has also proven itself proficient in the production of security equipment needed for the safety of cars, homes, streets and offices. In these days when kidnaping for ransom seems to overrun and overpower the country's entire security system, installation of surveillance cameras and other related electronic devices seems to be the trend among the rich and affluent members of the society. To that end, no stones are left unturned in their efforts to remain safe and secure in their homes, offices and on the road.

Usually, these security devices and monitoring apparatus which include close circuit cameras, close circuit television sets, door detectors, safety locks, and alarm bells are installed with the targets of alerting their owners and security personnel about the activities of criminals and other unwholesome elements around their vicinities. With these ICT facilities in place, the activities of kidnappers for ransom, hoodlums, bandits and other criminal elements have been brought under close watch in streets, homes and offices in

Nigeria. The huge snag still remains that access to these 21st century infrastructures are still beyond the reach of ordinary Nigerians. However, the adaptation of these modern ICT gadgets have impacted to the arrests of criminals and other unwholesome elements operating in parts of the country where they have been put in place(Onuoha, 2016).

Major Challenges Faced by the ICT Industry in Nigeria

Since the advent of the ICT industry in Nigeria, a number of critical challenges have affected its utilization, growth and usage in the country. Because of space constraints, only a few major ones shall be discussed briefly.

First and foremost, the proliferation of the ICT industry in Nigeria has been grappling with the challenges of unsteady and exorbitant prices of these products. So far, this problem has defied every approaches intended to effect some price control mechanisms by the government. This problem is so much endemic and complicated that different shops attach different prices to the same ICT products, a situation which is largely determined by the city concern, the quality of decorations in place at the shop or plaza concerned, the strategic location of the shop or plaza, or the marketing strategies deployed by the company concerned. The unfortunate implication is that a plaza located in Maitama District in the heart of Abuja Federal Capital City would usually sell a specific ICT product at a higher price than a similar shop situated at the popular Ogige Market in Nsukka town.

Secondly, some disgruntled and unemployed Nigerian youth have deployed avenues of abuse of ICT facilities, all in the name of reaping off unsuspecting innocent internet users. These individuals defraud and swindle cash away from unsuspecting persons who unfortunately fall into their traps on the internet. This is known as “yahoo – yahoo” by Nigerians, a crime which has sent so many victims and perpetrators into their early graves.

Finally, the ICT industry in Nigeria is still confronted with the insurmountable challenge of products adulteration. The ugly development is that fake manufacturers both from within and outside Nigeria flood the markets with fake and substandard products, with the effect that the fake

ones are easily mistaken for their genuine counterparts. Unfortunately, producers of the fake products also place their own substandard products at same prices with the genuine ones. This is one peculiar challenge which the global community needs to tackle drastically in Nigeria and elsewhere, most especially as the fake products easily find their ways across most geographical borders in Africa and the Asian continent.

Conclusion

This paper has attempted to explore some of those skills which teachers and learners of History of Education in tertiary establishments in Nigeria could key into and escape the harsh economic crunch facing the country. Following this development, the target is to literally open the eyes of the Nigerians that absolute dependence on single salary scheme breeds poverty, creates untold hardship, and exposes affected families to severe hardship, hunger and deprivation. It seeks to encourage Nigerians to be entrepreneurial, self-employed, and be able to create jobs for themselves and others. So far, it has therefore been the target of this discussion to encourage the cultures of hard work, entrepreneurship, creativity, and dignity of labour. This is an indication that unemployed Nigerians should begin to think outside the box, find alternative and genuine avenues of creating wealth, instead of whiling away several years in search of unavailable jobs which are nowhere to be found in the country's saturated labour markets.

The Way Forward

At this juncture, it is quite glaring that skill acquisition is the way forward. Armed with lucrative skills, opportunities of surviving Nigeria's harsh economic realities are abundant. The era of waiting for white collar jobs should be permanently discarded. Schools and tertiary establishments should be supported to focus more on the teaching and learning of skills-based curricula contents, thereby discouraging graduates from roaming the streets of Nigeria in search of non-existent jobs. Finally, schools and educational establishments in Nigeria need to be better funded equipped with relevant ICT infrastructures which motivate young learners to engage in skills acquisition after graduation.

References

- Akaakohol, B. M., & Avaan, T. (2013). Entrepreneurship education: An imperative for poverty reduction, self-reliance and Nigeria development. In I. Ikpa (Ed.) *Katsina-Ala Multidisciplinary Journal*, 1(4), 202-212.
- Chukwu, D. U., Olaitan, O. O., & Omeje, H. O. (2018). Entrepreneurial exposures as factors for self-reliance of building technology students in Nigerian universities. In C. U. Nkokoelonye (Ed.) *Journal of Educational Foundations (JEF)*, 7(1), 213-222.
- Danbatta, U. G. (2017). *The role of the ICT infrastructure in tertiary education in Nigeria: NCC Interventions*. Nsukka: University of Nigeria Press Ltd.
- Depaepe, M., Dams, K., de Vroede M., Eggermont, B., Lauwers, H., Simon, F., Vandenberghe, R., & Verhoeven, J. (2000). *Order in progress: Everyday educational practice in primary schools, Belgium, 1880-1970*. Leuven: Leuven University Press.
- Ezeobi, C. U., Ndubuaku, N. S., & Nwosu, J. N. (2021). Understanding the benefits and use of social media technologies by students with autism spectrum disorder. In E. C. Umeano (Ed.) *Journal of Educational Foundations (JEF)*, 10(1), 322-329.
- Federal Republic of Nigeria. (2014). *National policy on education*. Lagos: NERDC Press.
- Iwunna, P. U., Okoro, C. O. C., Ari, A. O., & Nwokeji, C. I. (2018). Images in school books as icons of children's educational development in Nigeria: A focus on primary school English Language books. In U. Eze, & J. Ibiam (Eds.). *Repositioning Childhood Education in Nigeria through Children's Literature*. Enugu: TIMEX, 20-34.
- Iwunna, P. U., Ujah, P. N., Dimonye, S. C., & Nkwocha, G. O. (2022). Radio network as a strategic medium of education and awareness creation in Nigeria during the Covid-19 pandemic era: A historical perspective (1956-2020). In I. Nwadinigwe (Ed.) *International Journal of Educational Research*, 10, 112-118.
- Odo, J. N. (2015). Challenges and prospects of integration of computer and ICT skills into teaching and learning of Physics education for entrepreneurial development in tertiary institution in Nigeria. In E. E. Agomuo (Ed.) *Computer Education Research Journal (CERJ)*, 2(1), 31-38.
- Okoro-Orubite, A. K. (2016). *Education and development in Nigeria: Historical trends over the centuries*. Port Harcourt: Pi. Africana Press.
- Omolewa, M. (2001). *The challenge of education in Nigeria*. Ibadan: Ibadan University Press.
- Onuoha, F. C. (2010). Youth unemployment and poverty: Connections and concerns for national development in Nigeria. In M. Ikejiani-Clark, E. O. Ezeani, C. B.
- Nwachukwu, & A. Akpuru-Aja (Eds.). *International Journal of Modern Political Economy*, 1(1), 115-136.
- Onuoha, F. C. (2016). Boko Haram's recruitment and radicalisation methods in Nigeria: An expose. In E. O. Ezeani (Ed.) *South East Journal of Political Science*, 2(1), 204-218.
- Osuagwu, P. (2020). Why Nigeria must take internet development serious. *Vanguard*, November 18.
- Osuala, E. C. (2004). *Principles and methods of Business and Computer Education*. Enugu: Cheston Books.

Pember, S. T., & Humbe, T. T. (2013). Promoting effective teaching/learning of Physics using computer simulations. In I. Ikpa (Ed.) Katsina-Ala Multidisciplinary Journal, 1(4), 29-38.

Umeh, J. (2020). Decagon, Eazi join hands to develop Nigerian software engineers. Vanguard, 18 November.

Wuana, S. D., & Iyav, G. T. (2013). Entrepreneurship education and rural women empowerment in Nigeria. In I. Ikpa (Ed.) Katsina-Ala Multidisciplinary Journal, 1(4), 190-201.