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Application of ICT to Agriculture as a Panacea to Unemployment in Nigeria

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Abstract:

This study looked at the relevance of agriculture in the Nigeria society and the need for employment and application of information and communication technology into agricultural sector as a solution to unemployment problems in Nigeria. As information and communication technology is a booming sector of the economy which presently engaged the younger generations of Nigerians, it can as well be used to improve the economic development of Nigeria and Nigerians. Data was gathered through qualitative method with focus group and individual in-depth interview as tools. Participants were selected randomly from a group of students, farmers and traders in Ogun and Lagos States of Nigeria. Findings revealed that although government support was essential in improving the agricultural sector in Nigeria, it was also important for citadels of learning and the private sectors to join hands in creating the much needed awareness amongst the youths on the significance of the

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agricultures and application of ICT as a veritable but untapped employment opportunity. The study also revealed that there is need to include agricultural studies into present day school curricular as well as create massive awareness through the mass media, especially Nollywood industry to portray the agricultural sector in a good light in order to ensure economic growth and uptake by the younger generations.

Keywords: ICT, Agriculture, Employment, Poverty alleviation, Nigeria

1. Introduction

Nigeria has recorded a drastic growth in the ICT sector. Agwu, (2012) stressed that within the last three years, the country has witnessed three tremendous expansions in ICT resources and facilities and about twenty million Nigerians now have access to the internet and mobile phone devices. With the liberalization policy of the federal government, more mobile phone operators and internet service providers (ISPS) has been licensed and are now operating as millions of Nigerians now have access to these facilities and services even in rural communities (Nwabueze and Ozioko 2011). According to Posu (2006, p.327) technological advancement is known to impact fast rate of economic development and has offered a world of opportunities to Nigerians (Makinde et al., 2013). Akwani, (2005) affirms that these opportunities are having an equally profound impact on the job and employment market. The authors noted that thousands of new jobs created in 2004 were directly created out of the telecom phenomenon. According to a research carried out by Agwu, Atuma, Aigbiremolen, & Iyoha, (2014), students were identified as the highest users of electronic and ICT devices. Also a research carried out by Chhabra, in 2008 on majority users of ICT, revealed that students and young people are major users of Information and communication Technology (Agwu, 2012). With respect to this revelation ICT can be used as a panacea to unemployment in Nigeria. In recent times, ICT, Agriculture and unemployment are significant issues in Nigerian system and economy.

Researchers and scholars from different discipline have therefore addressed the issue of Information and communication technology in Nigeria. This is because according to Eze (2013, p.301) information has now become the most strategic resource that is transforming the world economy. ICT has brought about changes in different aspects of human life in the 21st century (Agwu, et al 2014). Information and communication technology is an area said to be promoting economic development in Nigeria. ICT has recorded a lot of success in the enhancement of development in different sector of Nigeria. Previous researchers have looked at various issues as it concerns ICT and its application to all facets of human endeavours. Also scholars have gone further to investigate through their research how ICT has been employed in important sector of the economy for speedy development. Makinde et el (2013) looked at the use of ICT in the educational sector as a tool for language teaching, Jibia et el, (2013) focused on the use of ICT in tertiary institution libraries, Agwu, et al., (2014) stressed on the Impact of Information Communication Technologies in the Strategic Management of Financial Institutions. Ani, (2005) and Ajayi, (2008) reviewed the issue of bridging the gap through ICT in Nigerian libraries, which were aimed at emphasising the relevance of ICT in the educational sector.

Although Abdulsalam, Akinola and Buwanhot (2008, p.7) while stressing that “Information and communication technology has a role to solve agricultural related problems ranging from site selection to sale of farm produces in many parts of the world, the authors noted that the application of ICT to agriculture specifically in Nigeria has not been widespread. The consequences of this according to Awe, (2012, p.3) is that countries with better access to ICT and who apply ICT in a widespread inclusive manner are able to seize the advantages of globalization. On the other hand those with inadequate ICT resources end up being the victims of globalization. However, scholars like those above have centred their studies majorly on the relationship that exists between ICT and agriculture and challenges facing the Nigerian agricultural sector, but no research has been done on the application of ICT to agriculture as a panacea to employment problem in Nigeria. On the other hand, the down fall of the economy presently, the relevance of agriculture and the pressing need to invest in other sector of the country to enhance economic growth makes this research relevant and timely for

development of Nigeria and the Nigerian people. Nonetheless, empirical validation about the uptake of agricultural practices by the youths in Nigeria has been scanty or rather non-existent. Therefore, a gap exists in the research in this area of strategic importance agricultural practices to the nation's economy. This is however surprising when one considers the importance of agriculture, that apart from the oil sector, the industry is seen as the one of the most powerful engine of growth for necessary economic development in the country that requires the necessary attention by all and sundry for it to be effective. This study, therefore aims to examine the application of ICT into agricultural practices as a panacea to the incessant unemployment problems in Nigeria. Therefore, qualitative method will be employed and this entails the use of focus group discussion technique and interview method to gather information on the relevance of agricultural in economic growth of Nigeria, and the place of ICT in agriculture for solving unemployment in Nigeria. To effectively carry out this research and present results, participants in the focus group consisted of students in their final year in two universities, farmers and farm produce sellers. These students have been identified as the major users of ICT and student soon moving to the labour market. Their opinion will therefore help the researcher discover if the application of ICT to agriculture can sway these students as adopters of ICT will in future apply them to agricultural practices instead of looking for paid employments.

2. Literature review

2.1 A review of the agricultural system

The term Agriculture was derived from a Latin word known as 'ager' which means field, and 'culture' which means to cultivate. Agriculture can simply be defined as the cultivation of the soil and rearing of animals for the purpose of feeding for survival. This definition in itself point out the relevance of agriculture in every society. According to Ogbu (2011), President Goodluck Jonathan stressed that "agriculture holds a better promise in the march towards growing the economy than the oil and gas as it provides more employment as well as ensures food security". Agwu and Kadiri (2014) stressed that the Lagos Commerce and Industry identifies the agricultural sector in Nigeria as the segment that is most critical to the

achievement of the elusive goal of a diversified economy. Based on this information, there is need to enhance the agricultural sector in Nigeria.

The important question is how did Nigeria get here? It is necessary to understand how this all started and factors responsible for this problem plaguing the nation. According to the present minister for Agriculture, Akinwunmi Adeshina, in President Goodluck Jonathan's government, *'in the 1960s, agriculture accounted for 65-70 percent of total exports; it fell to about 40 percent in the 1970s, and crashed to less than two percent in the late 1990s.'*

Today, Nigeria remains a net importer of food. Either way, result shows that the Nigerian agricultural sector has dropped significantly. The curse of this over time occurrence is said to be the oil sector in Nigeria and this has brought about neglect of the agricultural sector and a complete focus on the oil sector thereby neglecting the potential obvious in agricultural sector. As the population of Nigeria increase daily, there is need for the agricultural sector to be revived and supported to boom again. It is through agriculture that the nation can boost economic development, tackle the issue of food shortage and starvation (Agwu and Kadiri 2014). According to Ching, (2008), the bulk of the food produced in Africa comes from small family farms that are primarily cultivated for family needs.

Overtime, the agricultural sector is not the only area that has been neglected despite its hidden potentials for national development but also is the growing unemployment issue that is increasing daily. According to Okafor (2013, p.359), the problem of chronic youth unemployment is very evident in Nigeria. Every year thousands of graduates are turn out for whom there are no jobs. Nigerian streets are littered with youth hawkers who ordinarily would have found gainful employment in some enterprise (Agwu and Kadiri 2014). Unemployment in Nigeria has been in existence for a long time and this problem according to Obadan and Odusola (2000, pp 10-11) has posed a great challenge to various Nigerian governments. In recent times, the incidence of unemployment in Nigeria has been deep and widespread, cutting across all facets of age groups, educational strata and geographical entities. Unemployment problem in Nigeria was more endemic in the early 1980-1990s than any other period (Chigbu, 2012). Unemployment rate rose from 4.3 percent in 1976 to 6.4 percent in

1980. It was recorded that there was some marginal decline between 1981 and 1986. The unemployment rate oscillated between 5.3 and 6.4 percent during 1980 - 85 periods (Ogbu, 2010). The economic down-turn that occurred did not only discourage new investment but also forced government to implement stabilization measure, (Ikpefan, Owolabi, Agwu & Adetula (2014).

It is important to draw attention to the growing problem of unemployment because according to Agwu and Kadiri (2014) for the youths to become useful resource in Nigeria project, they must be gainfully employed. With the lack of interest of young graduates in the agricultural sector, Eugene, (2008) stressed that the gospel of economic salvation cannot be preached without due regard to agricultural development. This is because agriculture is the major and most certain path to economic growth and sustainability. With vast landscape and agricultural friendly climate, Nigeria has the capability to carry out farming on a larger scale, (Agwu and Kadiri 2014).

2.2 Development of ICT in Nigeria

Information and communications technology is refers to technologies that provide access to information through telecommunications. This includes the Internet, wireless networks, cell phones, and other communication medium” (National Bureau of statistics, (2012). Agwu (2012) stressed that ICT is an umbrella term that includes communication device and applications such as radio, television, computers, cell phones, mobile phones, satellite etc. However, Osakwe (2010, p.388) noted that information and communication technology means different things to different educators and researchers; hence there are various views and definitions of ICT. Abubakar, (2012) pointed out that some scholars see it as a term that encompasses a lot of activities involving the acquisition, storage, processing and dissemination of information through the use of appropriate software and hardware designed for that purpose. Furthermore, Agwu, et al., (2014) noted that information and communication technology had developed in a fast rate in Nigeria and has help drive the Nigerian economy faster than imagined. Eke, (2013) confirms this in the Daylive online and stated that it is generally accepted that ICT will drive the transformation of Africa, with Nigeria in the

forefront. According to Awe, (2012, p.2) “Information and Communications Technology (ICT) has become a major tool for learning, work, recreation and innovation. Information has become the key enabler and currency of this era and ICT is the driver. Abubakar (2010) believes that information and communication technology has taken a central position in all spheres of human endeavour. Their roles in societal development have been considered pervasive. This shows that ICTs now serves as backbone for societal development in all ramifications and ICT is now applied to all field of human endeavour. Agwu, et al., (2014) also noted that the 20th century marked the beginning of ICT in the Nigerian society. According to Agwu (2012) the role of information increased immeasurably as a result of social progress and the vigorous development in science and technology. The spread of the use of ICT in Nigeria has been fast. Before, ICT was focused on areas of broadcasting compared to what we have now, (National Bureau of statistics, 2012).

The era of post and telegram in Nigeria

Telecommunication was invented in 1923 with the use of telephone (Chhabra, 2013). In order to enhance telephone service in Nigeria, Umaru and Zubairu (2012) noted that the telecommunication arm of the post and telegraph Department and the Nigeria telecommunication limited, which previously managed the domestic and external services respectively were merged in 1984 to single profit-oriented limited liability company called NITEL. Internal telecommunication system was later abandoned in Nigeria as people began to focus on communication across boards. In 1957, an antenna called Lanlate 2 was added to the previous Antenna launched in 1971. By 1977 Nigerians started making use of the computer, even though a few made use of this technology at the time and students began to offer computer science subjects in Universities, (Spier, 2010). According to Agwu, (2012) Africa suffers from the most expensive broadband costs in the world, at over \$900 a month compared to approximately \$100 per month in the Americas and European countries. Mobile phone use has grown, however, leapfrogging over the era of landlines for many; there are currently a total of 70,337,657 telephone subscribers and 11 million internet users in Nigeria (Ajayi 2008) and Nigeria has just emerged as the largest mobile telecom market in Africa with more than 61 million mobile subscribers. The telecommunications sector continues to

perform impressively and has remained one of the major drivers of growth in the Nigerian economy (Agwu et al., 2014) and the sector recorded a real GDP growth of 34.69 percent in the third quarter of 2009. Till date the business of ICT is well seen in Nigeria as it has also been noted that this sector has created job opportunities for many unemployed graduates in Nigeria. Eko, (2010) noted that Nigeria, where over 75% of the population, mostly rural dwellers, are involved in agricultural activities, yet accounting for less than 5% of the foreign exchange earnings, the sector remains largely subsistent, primitive and undeveloped. Iruonagba, (2002) also affirms that agriculture which was the mainstay of Nigeria's economy prior to the discovery of oil has been relegated to the background leading to the country's mono-economy status. Eko, (2010) and Agwu (2012) further asserted that in the past when there was no advancement in science or technological farming was effective and productive.

Agricultural Development in Nigeria: the tortuous journey

In time past, between 1861 -1960, according to Chinweizu, (2006) agriculture received so much attention from the government and emphasis was placed on research and extension service. During this period, Sir Claude McDonald established a botanicals research centre in Lagos. According to Eko, (2010), "agriculture played a pivotal role in laying the foundations for economic growth and social infrastructural development in Nigeria. This was achieved through massive investment in agriculture by both the federal and regional governments, leading to the establishment of research stations across the country. These include; Cocoa Research Institute of Nigeria (CRIN), Ibadan; National Institute for Horticultural Research and Training (NIHORT), Ibadan; Institute for Agricultural Research and Training (IAR&T), Moor Plantation, Ibadan; National Institute for Oil Palm Research (NIFOR), Benin; Rubber Research Institute of Nigeria (RRIN), Benin; National Cereal Research Institute (NCRI), Bodeji; Forestry Research Institute of Nigeria (FRIN), Ibadan; National Veterinary Research Institute (NVRI) Vom, Jos; National Root Crops Research Institute (NRCRI), Umudike; National Institute for Fisheries and Fresh Water Research, Kainji; National Institute for Oceanography and Marine Research, Lagos; National Institute for Animal Production, Zaria; International Institute for Tropical Agriculture (IITA), Ibadan; National Institute for Trypanosomiasis Research (NITR), Kaduna; and 3 Universities of Agriculture across the regions.

Training programmes of the agriculture department started in the mid 1940's. Additional facilities for training of junior staff in agriculture were provided, as well as scholarships for agricultural students in Yaba Higher College and imperial college of tropical agriculture in Trinidad and Tobago, an island in West Indies (Chinweizu, 2006). Research on cocoa started with the establishment of West African Institute for Oil Palm Research. This period was marked with the development of cotton, and rice cultivation, oil palm, and groundnut. Nigeria was not only producing these crops but also took part in exporting to other countries. With the creation of more states in Nigeria after independent, livestock production was dominated by the North region. Nigerian veterinary came to be in 1914 to see to livestock cultivation. Also in Agege crops such as maize, oil palm, yam, cassava, kola, pineapple and coffee were cultivated, (Okafor, 2001; Enete and Amusa, 2010; Dudu and Agwu, 2014). By 1964-1966, fishery was enhanced which was followed by the discovery of prawns in the Eastern part of Nigeria and by 1970, fish farming had received a boost. In Lagos according to Umaru and Zubairu (2012), although the fisheries service left all Lagos fisheries development work to the western region and concerned itself with the development of modern fishing vessels, licensing, planning and research, the fisheries activities in the country was sustained and there was good storage system, higher capital returns for efforts, improvement in processing and effective distribution methods. The Federal Ministry of Trade and Investment (2011) stressed that the agricultural sector has ceased to be an important contributor to foreign exchange earnings and its contribution to employment has declined. The federal ministry further stressed that this situation had not always been so as Nigeria was an exporter of food crops. Ogbu (2010) stressed that the Olusegun Obasanjo's governmental impact on agriculture contributed to about 29% to GDP, it brought about increase employment and reduced poverty. However, the sector was stagnant during the oil boom decade of the 1970s, and this accounted largely for the declining share of its contributions afterwards, (Opara, 2001). The author further stressed that the trend in the share of agriculture in the GDP shows a substantial variation and long-term decline from 60% in the early 1960s through 48.8% in the 1970s and 22.2% in the 1980s. Unstable and often inappropriate economic policies (of pricing, trade and exchange rate), the relative neglect of the sector and the negative impact of oil boom were also important factors

responsible for the decline in its contributions, (Okafor, 2001; Eko, 2010; Agwu and Kadiri, 2014). According to ThisDaylive, (2013) attempts were however made by various Nigerian governments such as Olusegun Obasanjo's Operation Feed the Nation (OFN) programme introduced in 1976; the Shehu Shagari Green Revolution programme of 1979-1983, and the Ibrahim Babangida DFFRI of 1988. Agwu and kadiri (2014) argued that all these well-intended programmes did not quite bail out the country's agricultural sector. In spite of these efforts, Umaru and Zubairu (2012) stated that agriculture has failed to keep pace with Nigeria's rapid population growth. Nigeria once exporter of food, now relies on imports to sustain its growing population, (Okafor, 2011). Fu and Aktar (2011) work suggests that there are indirect benefits from ICT-enhanced services delivery system not only in greater awareness and knowledge in agriculture technology and information but also in terms of farmers' attitudes towards trying new technology and new ways of life in the future. Evidence from the evaluation suggests that disadvantaged farmers benefit more from this intervention than those who are better off and also Siraj, (2012) noted that recent econometric studies have started to recognize telecommunication development as a basic ingredient of economic growth. The contribution of ICTs is now being fully realized (Agwu 2013) and if effectively employed in Agriculture, could open opportunities for employment among young graduates in Nigeria.

3. Data collection Methods

The nature of this study requires the collection of both primary and secondary data. Based on the aim of this study, quantitative method of data collection was not deemed fit due to the educational levels of the participants, instead, a qualitative research method was selected. The qualitative data collection method was utilized for this research with interview as the data collection tool. An open ended interview questions were used for this study. The aim of which was to gather the relevant information for the achievement of the research objectives.

Merriam (1998, 2009), stressed that qualitative research, often described as exploratory research are used in areas where there are few theories or a deficient body of knowledge. One advantage of using interviews was that rapport can be built in depth with each of the stakeholders (Palys, 2003; Merriam 2009; Yin 2011). The purpose of the interview was to

gain a deep insight into the importance of applying ICT into agriculture as a panacea to unemployment in Nigeria from the participants. The interviews provided a very good opportunity for very close communication as well as understanding between the researchers and the participants. These made it possible for the researchers to extract the relevant information whose accessibility was impossible via a structured questionnaire. The personal interviews also made it possible for the researchers to come face-to-face with the participants, thereby, had the opportunity to assess their expressions in the course of the discussions. Furthermore, Yin (2008) also states that a qualitative research is an experimental enquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not evident as is the case with the application of ICT in agricultural context within the Nigerian polity. Yin (2011) contend that evidences from qualitative research are often considered more compelling and the overall study is therefore regarded as being more robust.

The interview questions aim to establish among others:

- a) If the participants who has adopted the ICT intend to apply it agricultural practices
- b) Whether the participants have applied ICT in their agricultural practices
- c) Determine the impact of ICT application and continued usage in agricultural practices
- d) The level of computer skills and ownership of PCs by participants

The next section documents the findings of this study.

4. Findings

Information Communication Technology is beneficial and applicable to Agriculture

Participant 1 pointed out that ICT is used in agriculture and there is room for improvement. And she summed up thus: *‘I also think that farming no longer uses the traditional means. When it comes to irrigation and cultivation, they go technological, even in terms of harvesting, I heard there are new harvesting technological equipment which allows farmers harvest more because in harvesting, famers lose some crops, but this way, they are able to harvest more crops more efficiently’*.

Also participant 4 added that *“ICT is very important because it is very fast, it creates an opportunity for fast delivery of work but further notes that the old traditional way of farming should not be neglected”*. Giving illustrations on how information and communication technology applies to agriculture, participant 5 explained that *“ICT deals with data or information with technology, so in referring it to agriculture, let’s say someone comes to check your crops and the crops has disease, he gathers information and process it through the use of ICT and he is able to communicate such message to some other people. Let’s say the owner of the farm is somewhere in the US and the farm is here in Nigeria, ICT comes in by providing a platform where the owner of the farm in US can receive information accurately from his farm. Also ICT can be used where a farm owner has no direct access to his farm, ICT gives him the opportunity to remotely access the farm and see what is happening and then have whatever information he needs instead of being present on the farm site.”*

Giving more illustrations, Participant 4 stressed that *“ICT enables the managers in charge of farms keep stock of the things going on in the farm, I think every farm has a diary, normally in those days, we use the manual methods, keep papers and documentation of everything, but now there are computers, there is technology so you can, easily compute them and save the information in the system...you can easily retrieve the information from where you saved them, on the system and transfer it to anyone, if the person can’t reach you, you can send it through mail or call...”*.

Participant 6 added that ICT can be used in weather forecast to enable farmers study the weather and know the right time to plant a particular crop. While explaining the use of ICT in stock taking in agriculture, participants 6 further stated that *“as a farmer, you have 500 tubers of yam, you can take stock, and this will help the finance of the farm and help you plan. Maybe we would get to that stage where we would have to buy farm products online...information technology can help a farmer know when to plant a type of crop... so information and technology work hand in hand these days”*. Participant 7 added that *“ICT helps preserve information”*. On the other hand participant 8 believes that ICT can be used in agriculture and that. He further stated that in 2010, *“Dr Akinwunmi Adesina, the minister for agriculture in Nigeria gave farmers phones in local areas to enable farmers access to*

information on the type of fertilizer to use and right quantity to apply. So this has combined both the communication and technology and I believe it will help sensitise the youth to see the benefits in agriculture...because if majority of the youth go into agriculture it will reduce unemployment and increase GDP”.

However, participant 4 pointed out that the methods used in preserving crops those days are safer than methods used presently. In her words *“these crops have to be preserved, although I don’t know in details how they preserve these crops but I know that there are ways crops were preserved in those days but I know that they are safer but now most times chemicals are used and further stressed that these chemicals used in preserving crops are very dangerous to our health”.*

ICT will attract young graduate to agricultural sector and create employment

Participant 7 pointed out that Nigerian youths are naturally drawn to Information and communication technology. According to her, *“if they (youths) don’t find anything technological or glamorous or something that is in tune with money in agriculture, they will not venture into it, I am not saying agriculture does not have money in it, but then, ICT will help in improving agriculture and it will help attract the youth to agricultural sector.”* Giving examples she noted that *“everybody wants to work in Oil Company... but with ICT in agriculture, the use of technology will attract the young minds because all we see today are the old people in the rural area in agriculture, and everyone is running away from agriculture. But the infusion of technology will attract the youth.”* Furthermore participant 4 believes that *“ICT will create employment for young youths and those who do not have jobs because agriculture is an applied field.....you don’t really have to study agriculture in school. You can study ICT and work in an agricultural firm....it is a very broad area that can absorb different fields of knowledge”.* Commenting further Participant 5 stated that *“there are youths dedicated to developing programmes that could be used in agriculture. There are youths that are into video coverage, youths that are into developing computer parts, whatever it is, and any basic aspects can actually create job opportunities for youths out there”.* Analysing the employment method in Nigeria, participant 8 argued that *“in the employment sector in*

Nigeria as it is obtained today, it doesn't matter what you study, when you go to the banks, you see an engineer who went to school for five years counting money on the counter with somebody who did HND for 4 years, so I think it doesn't matter what you study now, what we need now is to make the field interesting to youths”.

However participant 9 believes that the agricultural sector is not the only sector that will help alleviate employment problem in Nigeria but according to him *“there are lots of potentials in agriculture, but there are other areas that will help the economy...agriculture is just one aspect but there are other aspect of agriculture which will involve other industries coming in, which will not necessarily be food. Transportation is another industry. So that's why I will not say yes totally, but agriculture has some potential to at least solve 70% of unemployment problem in Nigeria.”* He further noted that *“by the time youth recognizes that agriculture has gone beyond the way they look at it, it has gone to the point that they can even use ICT, they will begin to look at it in a different way.”*

Youths will take part in farming if there is a point of relationship with their course

While participant 7 stated that *“agriculture has a lot of money in it, she pointed out that it is important that youth get interested now because in the next 10 to 20 years people will be looking for the money in agriculture, if ICT does not get there as quick as possible.”* However, 9 participants argued that he would not take agriculture as a full time job. *“I can't take farming as a full time profession because I don't have necessary training that will be involved...I think what I will actually be able to do is to get someone who is experienced to manage it.”* In addition, participant 1 argued that he would like to own a farm but it is not an area of interest for him. According to participant 5 *“I am not interested in agriculture, but if there is a merger, if there is a relationship between what I am studying now and agriculture, then I might consider it....but will not go fully into agriculture”.* However, participant 3 feels that she would only go into agriculture if *“it is linked to an area of interest”.* She further noted that passion and interest are important factors in choosing any profession. Participant 3 complained that right from the beginning the lecturers never made us interested in agriculture. He noted that *“what you have knowledge about gives you drive, so for now I will say no to full time farming”.*

Lack of orientation and awareness by Universities and Parents

According to participant 9, *“the orientation youth have is that agriculture is reserved for the aged, reserved for the illiterates, it is reserved for the uneducated”* Also participant 7 while stressing the lack of interest of Nigerian youths in agriculture stated that *“it all starts from the foundation and from our parents”*. Explaining further, participant 4 stressed that *“the problem basically is from the foundation, it’s the knowledge we have always had as children that agriculture is boring, it’s all about going to the farm. That mentality, and the knowledge you instil in a child, is what the child will grow up with. The focus has always been on the oil sector. My mother will say I want my child to be a doctor, they have not really thrown more light on agriculture”*. Participant 3 feels he would have embraced agriculture if he was sensitised early and if agriculture was made appealing to him at a younger age. He noted that there is no awareness on agriculture and if there were, such awareness was not frequently done. Participant 4 therefore noted that, the solution is to sensitize youths from a very young age. This will enable them understand the importance and benefits of agriculture to them as individuals and the society.

Lack of Government support

While stressing government involvement in agricultural sector in Nigeria, participant 8 pointed out that the Olusegun Obasanjo regime did not do enough in promoting the agriculture sector. According to him, during *“Obasanjo’s regime there was mass importation of fertilizer which did not match the soil type in the various areas it was used. For example after fertilizer was imported, fertilizer tested in Sokoto was brought to Lagos for example to be used and the soil type are not the same, so instead of the fertilizer helping the crops, it was killing the crops”*. However, Participant 8, blames the government for allocating budget to the orientation agency who has refused to do their job effectively. According to him the job of the agency is to sensitize Nigerians on government policies. Again he noted that government should get down to business rather than just paying salaries to farmers, giving out awards and contracting the importation of fertilizer to their cronies.

“If you look at government budget from 2004 - 2009, there is paying of salaries and importation of fertilizer, we need to involve a sustainable development, it is the only way we can get youths involved in agriculture “.

Also participant 7 stressed that lack of government support by focusing on the oil sector has affected youth interest in agriculture. Explaining further she noted that youths have lost interest in agriculture and the government should find a balance between the oil sector and agriculture rather than make young people lose focus. However participant 1 stated that the government is not to blame because *“Nigerians have crave for easy money. And because agriculture is one of those sectors that you have to work hard to get money, that’s why there is this diversion from agriculture to other businesses and white collar jobs”*. However participant 4 believes the government and Nigerian youth should share the blame because, *“the government alone cannot build a nation and build a sector, it is the collective hand of the people that can build the agricultural sector. We should all take the blame individually and as a nation and take up the responsibility to improve the agricultural sector”*. On the other hand, participant 8 believes there should be a supportive system from the government to the people where the problem of food storage would be solved through the use of Information and communication technology. Participant 7 however warned that it is important for Nigerian youths to engage in agriculture because in no distant future, it will be the mainstay of the economy.

The negative media portrayal of agriculture

Majority of the participants also complained about the portrayal of agriculture in the media, especially in Nollywood movies. According to participant 5, when you watch our Nigerian movies today, it is grandfathers that are farmers...you just picture this old person in the farm; no rich person is into agriculture from what we watch in the movies. Farming only happen in the villages not in the cities, that’s how it is depicted in the movies. Participant 4 also affirms that the media portrays the negative aspect of agriculture. He further stated that *‘I think they portray agriculture as dying instead of portraying it as something that can bring life and resources’*.

Furthermore, the Chief Executive Officer of Inter-trust Limited, Dr Chilo Offiah, stressed that Nigeria should embark on agricultural revolution programmes thus: “*eastern states should go back to palm oil production with a product target of 1 million to 10 million bags a year. The western states should be asked to go back to cocoa producing or plantation and they should have a target and the North should also be given target in animal husbandry, groundnut-pyramid, and the tuber yam seedlings, etc*”. According to Mr Offiah, for Nigerian as a nation to meet the estimated target on economic growth, every state should go into agricultural production and specialize in whatever area it has comparative advantage. In furtherance of this, Dr Akin Osunde, head of department of soil science in the Federal University of Technology Minna, stressed that “it is rather unfortunate that agriculture, which is the backbone of development, has been left to fast rate of decline over the years”. According to him “we have subjected agriculture to the least area of priority at the expense of oil”. He also stressed that “there is no country in this world that can stand on its feet without a reasonable commitment to agriculture”.

5. Summary and conclusion

The analysis threw up more questions than answers. It was observed that though the Nigerian government has in the recent past been liberalizing the communication sector, just as the banking sector, unfortunately, as pointed out by some of the interviewees, the cost of connectivity is still beyond the reach of the low income earners. Even among the middle-class, ICT products such as video conferencing gadgets, internet based virtual communities, televisions; interactive radios, etc are not easily available. Another fall out of the interview is the comments on the outdated curriculum that is still being used in the Nigerian educational institutions. The current theory based curriculum is still widely adopted in all cadres of the Nigerian educational system; unfortunately these curricular have since gone out of time with global trends. The youths of today are burdened with the hefty challenges of self improvement beyond the formal educational systems, unlike their counterparts in the western worlds where entrepreneurship has taken centre stage. There is therefore the need for a paradigm shift from the high level dependency on certificate oriented system of education to the new global trend of knowledge-based and hands-on approach. Tai Solarin, a renowned educationist, once

observed that a typical Nigerian graduate feels too educated to be a farmer, but are not literate enough to be clerks in the offices. The philosophical import of this statement shows that Nigeria is blessed with half-baked graduates who are forever in search of white collar jobs and ready-made tools as political thugs. The energies, appetite and mindset of these youths could be positively channelled towards agricultural production with the application of information and communication technologies. This will ultimately engage most of these sound minds and turn them away from crimes and other social vices. With this achieved, the unemployment issues will become a thing of the past. Since youth unemployment is the cause of rural and urban drift, the application of ICT into agriculture will keep most youths in the rural and urban areas as they will be gainfully employed.

6. Recommendation

The application of ICT into agricultural practices, based on the above, is surely one of the ways the government can curb the rising unemployment problems in Nigeria. Based on the analysis of the interview, the authors recommend the following:

- Provision of basic infrastructures in all nooks and crannies of Nigeria. This will ultimately stem the rural-urban drift as the quality of life of rural dwellers will be upgraded. And youths in these areas will enjoy and utilize same amenities as their counterparts in the cities.
- As it is obtained the developed countries, entrepreneurship and vocational education should be incorporated in the curricular of educational institutions. These will ultimately give rise to problem based learning approach where the youths and university graduates will metamorphose from perpetual job-seekers to job-creators and employers of labour as their counterparts in the developed countries.
- Agricultural equipments and ICTs materials should be heavily subsidised. And soft loans be made available to graduates who intend to delve into agriculture.

6. References

- Abubakar, B. (2010). Availability and use of Information and Communication Technology (ICT) in six Nigerian University library schools. *Library philosophy and practice*. Retrieved from www.webpages.uidaho.edu
- Agwu, E. (2012) Generations X and Y's adoption of internet and internet banking in Nigeria: a qualitative study. *International Journal of Online Marketing*, 2(4), 68-81, October-December 2012
- Agwu, M.E, and Kadiri, I. (2014) Analysis of critical strategic factors for the successful implementation of poverty alleviation programmes in Nigeria. *International Journal of Computational Engineering & Management*, Vol. 17(1) 1–9, January 2014
- Agwu, Edwin (2013). From reluctance to resistance of the adoption of internet banking services in selected cities of the United Kingdom; *International Journal of Customer Relationship Marketing and Management*, 4(4), 41-56, October-December 2013
- Agwu, M. E., Atuma, O., Aigbiremolen, O. M. & Iyoha, F., (2014). The Impact of Information Communication Technologies in the Strategic Management of Financial Institutions. *International Review of Management and Business Research*, Vol. 3 Issue.3, pp 1588-1602. September 2014. Available at www.irnbrjournal.com
- Ahmad, N. and Saymour, R. (2008). *Defining Entrepreneurial activity: Definitions supporting Frameworks for Data collection*. Retrieved from www.oecd.org/std/business-stats/39651330.pdf
- Ajayi, A. (2008). Towards Effective use of Information and Communication Technology (ICT) for teaching in Nigeria Colleges of Education. *Asian Journal of Information Technology* 7(5), 210-214. Retrieved from <http://www.medwelljournals.com/abstract/?doi=ajit.2008.210.214>
- Ani, O. (2005). Adoption of Information and Communication Technology (ICT) in academic libraries: A strategy for library networking in Nigeria. *Electronic Library*. 23(6), 701-708. Retrieved from <http://www.emeraldinsight.com/journals.htm?articleid=1529807>.
- Awe, J. (2012). *Public Private Partnership (PPP) in ICT for development in Nigeria*. Retrieved from www.enigeria.gov.ng/2012/downloads/Awe-03.doc

- Blanchflower, D. and Oswald, A. (1999). Entrepreneurship and the youth labour market problem, LEED Document [(DT/LEED (99) 11], Territorial Development Service, OECD, Paris
- Baron, R. (2014). *Essentials of Entrepreneurship*. Okalahama US: Edward Eglar Publishing. Retrieved from www.e-eglar.co.uk/PDFS/webcats/Enterpreneurshipuk.pdf
- Brijah, L., & Dyer, E. (2003). Problems in recruiting students into Agricultural Education on programs: A Delphi study of Agric teacher perceptions. *Journal of Agricultural Education*. 44(2), pp 75-85. Retrieved from <http://www.jae-online.org/attachments/article/339/44-02-75.pdf>.
- Chhabra, S. (2013). *ICT influences on Human Development, interaction and collaboration*. United state of America: IGI Global.
- Chigbu, U. (2012). *The case of Agriculture as the only saviour to Nigeria's Deing Economy*. Retrieved from <http://www.gamji.com/article4000/NEWS4400.htm>
- Chhabra, S. (2013) *ICT influences on Human Development, interaction and collaboration*. United state of America: IGI Global.
- Ching, L. L. (2008) Africa, the food crisis and food aid. Third world resurgence, issue no. 212, retrieved from www.twinside.org.sg/title2/susagri043.htm
- Chinweizu, N. (2006). *Discuss in details the history of Agriculture in Nigeria from the colonial era to the present day, pointing out clearly all Agricultural programmes*. Retrieved on from www.onlinenigeria.com/article
- Cuervo, A, Ribeiro, D., & Cuervo, A. (2007). Enterprenurship: concepts, theory and perspective. Introduction, Retrieved from www.uv.es/bcjauevg/docs/LibroCuervoRibeiroroigintroduction.pdf
- Dakwa, k. (2010). Information and communication technology in Nigeria: Prospect and challenges of development. "Africa Today" Retrieved from [www](http://www.africatoday.com).
- Drucker, P. (1985). *Innovation and Entrepreneurship*. London: William Heinemann.
- Eke, L. (2013). The ICT sector in Nigeria in 2013: A preview by Leo Stan Ekeh, chairman, zinox Group, *This Day lives online*. www.thisdaylive.com/article/the-ict-sector-in-nigeria

- Dudu, O.F. and Agwu, M. E. (2014) A review of the effect of pricing strategies on the purchase of consumer goods, *International Journal of Research in Management, Science & Technology* (E-ISSN: 2321-3264) Vol. 2, No. 2, pp.88-102, August 2014 Available at www.ijrmst.org
- Eko, N. (2010). Agriculture in Nigeria, retrieved from www.gamji.com/article8000/NEWS8697.htm
- Enete, A. A. and Amusa, A. T. (2010). Challenges of Agriculture adaptation to climate change in Nigeria: a synthesis from literature. *The journal of field actions. Field actions science reports..* [online], 4(1). Retrieved from <http://factsreports.revues.org/678>.
- Esters, L. (2007). Factors influencing postsecondary Education Enrolment Behaviours of urban Agricultural Education students. *Career and technical Education Research*, 32 (2), Pp 79-98. Retrieved from <http://acter.metapress.com/content/b6320388456j721g/>.
- Federal Ministry of Trade and Investment (2011). *Agriculture*. Retrieved from www.finti.gov.ng/component/content
- Fu L. and Aktar, S. (2011). ICTs as an enabler for private sector development. Information in economy report. Retrieved from [www.unctad.org/en/publications library/ier2011_en.pdf](http://www.unctad.org/en/publications-library/ier2011_en.pdf) on October 23, 2014
- Ikpefan, O.A., Owolabi, F., Agwu M.E. & Adetula, D. (2014) Working Capital Management And Profitability Of The Manufacturing Sector: An Empirical Investigation Of Nestle Nigeria Plc and Cadbury Nigeria Plc. *European Journal of Business and Social Sciences (EJBSS)*; Volume 3, Issue 06, pp 23-34 September 2014
- International Labour Organisation (ILO, 2009). "Youth entrepreneurship", Geneva
- Iruonagbe, T.C. (2009). "Rural-Urban Migration and Agricultural Development in Nigeria". *Arts and Social Sciences International Research Journal*. Vol. 1. Society for Academic Excellence, University of Nigeria Nsukka, Pp. 28-49.
- Iruonagbe, T. (2000). Rural-Urban and Agric Development in Nigeria society for research and academic excellence. Retrieved from www.academicexcellencesociety.com/rural-urban-migration.htm/
- Maclean, R. and Wilson, D.N. (2009). *International Handbook of Education for the changing World of Work: Bridging Academic and Vocational Learning*.

- Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco: Jossey-Bass
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass
- National Bureau of statistics, (2012). Agriculture. Retrieved from www.nigeriastat.gov.ng/sectorstat/sectors/Agriculture
- Naude, W., Szirmai, A., & Goedhuys, M. (2011). Innovations and entrepreneurship in developing country. Retrieved from www.wider.unu.edu/publication/polig/en.../UNU
- Obadan, M. and Odusola, A., (2000) "Productivity and unemployment in Nigeria" *National Centre for Economics Management and Administration*. Ibadan.
- Obayelu A.E & Ogunlade, I. (2006) Analysis of the use of Information and Communication Technology for gender empowerment and sustainable poverty alleviation in Nigeria. *International Journal of Education and Development using ICT*. 2(3). Retrieved from www.ijedict.dec.uwi.edu [23/04/14]
- OECD and European Commission (2004). *Career guidance: A handbook for policy makers*, (OECD/European Commission, Paris).
- Ogbu, A. (2010) Jonathan sees Agriculture as Economic booster. This Day live. (6th July, 2011). Retrieved from www.thisdaylive.com/articles/
- Ogunsola, A. and Ayobami, B. (2005). ICT in Nigeria. *Revolution or Evolution journal of social sciences*, 11(1), 7-14. Retrieved from www.icrepublishers.com/02-journals/Jss/Jss.
- Okafor, A. (2001, March 27). Experts Canvass Agricultural Revolution to boost Economy. *Vanguard Daily*. Retrieved from all Africa global media.
- Okafor, A. (2001, 27 March). Experts Canvass Agricultural Revolution to boost Economy *Vanguard Daily*, online, <http://www.hartford-hwp.com/archives/34a/130.html>.
- Okafor, A. (2011). "Unemployment in Nigeria- Youth Unemployment and implications for stability of Democracy in Nigeria". *Journal of sustainable Development in Africa*, 13(1), Clarion University of Pennsylvania, Clarion, Pennsylvania. Pp 358-373. ISSN 1520-5509.

- Opara, Q. (2001, 7 November). Subsidise Agriculture, ignore IMF, World Bank, Expert Tells FG. *This Day*. Retrieved from <http://www.hartford-hwp.com/archives/34a/index-ca.html>.
- Palys, T. (2003). *Research decisions: Quantitative and qualitative perspectives* (3rd ed.) Toronto: Nelson
- Sachs .J. (2006) *Combating Poverty Through Massive ICT Deployment*: United Nations, on Millennium Development Goals, MDGs, Day (Editorial) 13 December, 2006.
- Siraj, M. (2012). A model for ICT based service for agriculture extension in Pakistan. Knowledge for life. Retrieved from [www.r4d.dfid.gov.uk/PDF/OUTPUTS/MISC_info-Spiers,M.\(2010\).The development of information communication technologies in Nigerian libraries](http://www.r4d.dfid.gov.uk/PDF/OUTPUTS/MISC_info-Spiers,M.(2010).The%20development%20of%20information%20communication%20technologies%20in%20Nigerian%20libraries.pdf). Retrieved from <http://www.mYU3DG7VfkJ:eprints.rclis.org/bitstream/10760/14464/2/>
- Stockholm challenge (2008) *Using ICT for improving incomes of rural farmers – the Rural Information System*. Retrieved 8 October, 2014 from www.stockholmchallenge.se/data/2130
- This Day live, (2013, 1, October). *Nigeria’s Agricultural sector crawls at 53*. Retrieved on from www.thisdaylive.com on August 2, 2014
- Urama, N., & oduh, M., (2012). Impact of Development in Telecommunications on poverty in Nigeria. *Journal of Economics and sustainable Development*. 3(6), ISSN 2222-2855.
- Umaru, A. and Zubairu, A. (2012). An Empirical Analysis of the contribution of Agric and petroleum sector to the growth and development of the Nigeria Economy from 1960-2010. *International Journal of social science and Education*. 2(4), ISSN 2223-493XE
- UN Report (1999). Youth employment: Lisbon Declaration and Youth Policies, www.unicef.org Retrieved 23/10/14.
- Yin, R. K. (2011). *Qualitative research from start to finish*. New York, NY: Guilford.