**TWO ICT-BASED INSTRUCTIONAL TOOLS AND ADULT LEARNERS'
LEARNING OUTCOMES IN ENGLISH VOCABULARY IN OYO STATE**

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CERTIFICATION

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DEDICATION

This work is dedicated to my husband, Dr. Ayodeji Shittu, who played a great role in the course of this study and to my children Oluwafunmito and Ilerioluwa.

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Above all, I am grateful to the Almighty God, the Creator of the heavens and the earth, and to my Lord, Jesus Christ, for mercy and grace. Without Him all the efforts invested in this research would have been useless. To Him be glory, honour and praise for ever, Amen.

ABSTRACT

Vocabulary knowledge is fundamental to achieving success in learning any language. However, its acquisition and development is the greatest challenge adult learners face in learning English vocabulary. Previous studies have focused largely on phonology and grammar aspects of English language using ICT to enhance learning outcomes with little emphasis on vocabulary. Therefore, this study was designed to determine the effects of ICT-based Instructional Package (IbIP) with locally derived content, using two ICT tools (Talking Book –TB and Mobile Phone -MP) on adult learners' learning outcomes in English vocabulary (achievement in English vocabulary, ICT skill and attitude to ICT use) in Oyo State, Nigeria. The moderating effects of gender and age were also examined.

Vgotsky Constructivist's Theory provided the framework, while mixed methods of survey and pretest-posttest control group quasi experimental design of 3x2x2 factorial matrix were adopted to execute the study in two stages. The first stage involved the design, development and validation of locally derived-content IbIP. The second stage adopted the pretest-posttest control group quasi experimental design using TB and MP to determine the effect of the IbIP. Three state-owned adult literacy centres (Moniya, Bodija and Shasha) with at least 20 intermediate adult literacy learners were purposively selected, and randomly assigned to TB (20), MP (20) and control (20) groups. Treatment lasted 10 weeks. Instruments used were Attitude to ICT-based Learning Questionnaire (r=0.86), English Vocabulary Achievement Test (r=0.94), Observational ICT Skill Rating Scale (r=0.78), and TB (r=0.86) and MP (r=0.86) learner experience questionnaire. In-depth interview session was held with the facilitator of each centre. Quantitative data were analysed using Analysis of covariance and Bonferroni Post hoc test at 0.05 level of significance, while qualitative data were content analysed.

Participants were mostly female (90.0%) with age of 49.8 ±2.30 years; exhibiting low (11.9%) and high (77.1%) ICT skills during pretest and posttest respectively. The locally derived IbIP was highly rated by the adult learners and facilitators; the TB (3.42≥2.50) and MP (3.31≥2.50) features and contents were found easy and interesting. While there were significant main effects of treatment on learners' achievement in English vocabulary ($F_{(2;50)}$=5.94 partial; η^2=0.19) and learners' ICT skill ($F_{(2;50)}$=83.94 partial; η^2=0.77), there was none on attitude towards ICT. Learners that were exposed to TB had highest mean score in vocabulary achievement (20.73), followed by those exposed to MP (19.88) and control (14.76) groups. Learners that were exposed to MP had the highest mean score with ICT skill (44.75), followed by those exposed to TB (43.14) and control (18.87) groups. The main effects of age and gender were not significant. The two-and-three-way interaction effects were not significant. Facilitators perceived that ICT tools facilitated easy teaching of English vocabulary. However, the phobia for technology contributed to the withdrawal of some participants.

Integrating ICT into teaching and learning of English vocabulary using talking book and mobile phone enhanced adult learners' learning outcomes in Oyo State, Nigeria. Facilitators should adopt and integrate both ICT tools for improved learning outcomes regardless of age and gender.

Keywords: Talking book and mobile phone, ICT integration into adult learning, Achievement in English vocabulary

Word count: 494

TABLE OF CONTENT

CHAPTER ONE; INTRODUCTION

CHAPTER TWO: REVIEW OF RELATED LITERATURE

CHAPTER FOUR: RESULTS AND DISCUSSION OF FINDINGS

CHAPTER FIVE: SUMMARY, RECOMMENDATIONS AND CONCLUSION

APPENDICES

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE
INTRODUCTION

1.1   Background to the study

Learning English language is very important in a multi-lingual society like Nigeria where English language is the official language, language of trade, education, technology and an essential component of functional adult literacy education. There is focus on the teaching and learning of English in Nigeria, because none of Nigeria's over 500 indigenous languages has assumed the status of an official language. Therefore, English language has continued to serve as the official language. This status of English language is recognised by the National Policy on Education, which makes it imperative for anyone who desires to be literate and to relate effectively and independently with the modern world to learn English language as second language (Eshiet, 2013).

Second language learning is an active process which requires that learners continually acquire lexicons in order to function well in a given context. Therefore, it is very important for a learner of a second language to acquire a considerable amount of vocabulary in the language to communicate effectively (Moghadam, Zainal and Ghaderpour, 2012). Vocabulary development is widely acknowledged as very important in language learning (Kelsey, 2017) and constitutes a crucial aspect of language comprehension and production (Yang and Liu, 2014). It is recognised as one of the best determinants of reading ability and the capability to get new information from texts (Moghadam, Zainal and Ghaderpour, 2012).

The significance of vocabulary instruction as bedrock to language learning, and particularly second language learning, has been underscored by numerous studies and reports which describe the extent of vocabulary acquisition as the best indicator of language ability and competence. It has also been established by scholars that vocabulary knowledge is an important determiner of a language learners' success and academic achievement (Kim, 2011). Mahnaz and Mozaheb (2012) reiterate the fact that vocabulary enhances the four language skills, namely listening, speaking, reading, and writing and mediates between English as a second language (hence, ESL) and content-area which help learners to acknowledge that insufficient vocabulary knowledge is a barrier to learning. Ebrahimpourtaher and Eissaie (2015) viewed vocabulary as a core element of language proficiency which provides much of the foundation for how well learners speak, listen, read

and write in the target language. Therefore, a strong vocabulary helps ESL learners both in reading comprehension and other language skills. Vocabulary knowledge is indispensable for successful second language use, including the construction of complete spoken and written texts, and enables a leaner to use the structures and functions learned for an intelligible communication (Alqahtani, 2015).

\In spite of the acknowledgement of the role of vocabulary in successful second language learning, vocabulary learning task for adult learners of ESL is seen to be too enormous and challenging. It involves a complex process of decoding, and comprehension of vast amount of vocabulary which is considered too challenging for adult second language (L2) learners, especially those who did not have formal education and learn English language late. As Salehi (2016) noted, gaining mastery of vocabulary knowledge is one of the most challenging tasks learners face while acquiring a second language. And the challenges faced by adult ESL learners in learning English vocabulary have resultant effects of insufficient vocabulary knowledge and breakdown in communication which hinders effective use of the language (Sindhu and Senkamalam, 2015), disappointment and loss of confidence in learning the language (Mahnaz and Mozaheb, 2012), and poor performance in production and usage (Adepoju, 2016). As studies have established, some of the challenges faced by learners in the learning of vocabulary are largely attributed to the open-endedness of the system of vocabulary learning which does not have rules that learners may follow to acquire and develop their knowledge unlike other components of language, teachers' competence and vocabulary learning strategies among others (Alqhatani, 2015, Adepoju, 2016).

Due to this, there is a growing emphasis on the need to improve efficiency and performance in learning English vocabulary among ESL learners mainly because of the indispensable role it plays in successful achievement in language learning. In enhancing and improving vocabulary learning amongst ESL learners who are constantly faced with the problem of developing their vocabulary knowledge, it has been suggested that information and communication technology (hence, ICT) should be integrated into the domain of vocabulary instruction as learning tools in fostering vocabulary acquisition and development (Liu, 2016).

ICT has been recognized by language educators as instructional tool with great potential that facilitates and enhances second language teaching and its application is increasing (Donmus, 2010). It has also been discovered that ICT is able to generate either collaborative or independent learning environment in which learners can practice and learn a new language and can be used as a pedagogical tool for improving language learning and teaching beside its technological function (Tayebinik and Puteh, 2012). Yunus, Nordin, Salehi, Embi & Salehi (2014) claim that ICT is able to provide supplemental language activities which assist learners with learning specific language areas. Furthermore, many studies have shown that ICT will be useful in assisting ESL learners to improve their vocabulary knowledge (Gadanya, 2015).

ICT has been seen to be helpful in enhancing vocabulary learning. According to Hu (2011), ICT plays several roles in the general training of skills for memorizing vocabulary and their meaning; it is particularly useful in the presentation of mnemonic mediators for specific items of vocabulary. ICT devices have multiplied the opportunities to access learning resources. Hu (2011) asserts that using ICT devices in the delivery of vocabulary instructional content helps to facilitate contextual learning. It allows information that is available in learners' location, and relevant to their needs to be delivered in context. If the acquisition of new vocabulary items occurs timely and well situated, learners will understand and use what they have learned with less effort.

New generation of ICTs such as interactive whiteboard, PowerPoint, Moodle Google, Word Processing, Audacity, Moviemaker, Wikis, Tablets and Mobile Phones have been found useful in enhancing ESL learning in adult literacy and language education, especially in the delivery of instructions in ESL teaching (Low & Beverton, 2004). Another new generation of ICT that has been found useful in ESL teaching and learning, particularly in the area of vocabulary instruction, is electronic Talking Book (Ashley, 2011) which has been largely used among young children but not yet extended to adult literacy and ESL programme. This study seeks to explore how Talking Book and Mobile Phone can be integrated into the teaching and learning of English vocabulary among adult ESL learners and to determine their effects on learners' academic achievement in English vocabulary, ICT skill and attitude to ICT use.

Talking Books are electronic texts with embedded speech, which speech component reads out sections of the book and provides the pronunciation of specific words within the text. It features not only the written word but also multimedia elements such as animations, narrations, music and video (Yunus, Nordin,Salehi, Embi & Salehi, 2014). The Talking Book designed and developed for this study is a simulated book that features hypermedia such as texts, illustrations, highlighted texts, narrations and touch buttons to navigate through the pages of the book. The electronic device used for the deployment of Talking Book in this study is Tablet with features like short message service (SMS), e-dictionary, camera, audio recording, video recording, multimedia message service, instant messaging service, internet, email services and social media applications which are found to be useful in supporting vocabulary acquisition and development but different from Mobile Phones in terms of visibility size (bigger than mobile phone), resolution (information on it is usually bigger than how it would appear on the mobile phone), memory size and operating system.

Tablets are a small hand-held electronic device that come in different sizes (e,g 7, 8 and 10 inches etc) developed to improve reading experience. It presents greater advantage over a laptop or a desktop in that it is lightweight, portable, and springs to life without delay. It can keep huge number of books and also offers enhanced e-books featuring images, videos and audios which may be impossible in prints. Clear text and fonts and sharp display are features of Tablets that make what you see resemble a book page. Tablets are screen touch enabled which encourage immediacy and ease of use; it also eases users' fear and facilitates adoption. They also have an in-built keyboard for input and output function (Madan, 2011).

Studies have shown that Talking Books have the potentials to improve and develop learner's vocabulary knowledge. It can also be useful tools for literacy facilitators as they can be equipped with a system for tracking words with troublesome pronunciations. This system can provide feedback to teachers by enabling them to identify the words that a particular learner needs assistance with (UNESCO, 2006). Lewin (1997), cited in Adelore (2007), found that children using Talking Books were more able to read independently, possibly because it provided them with cues to cross-check meanings. Colourful illustrations and animations also motivated children to use the programme on their own, as well as promoting basic word recognition. It also helps children learn vocabulary through support

features offered, such as narrations, feedback and sound effects (Yunus, Nordin,Salehi, Embi & Salehi, 2014).

On the other hand, Mobile Phone is a small handheld electronic devices used for communication. It is gaining recognition in language learning due to some of its features that support and enhance second language learning and retention especially in the area of vocabulary instructions. Such features include short message services (SMS), multimedia services (MMS), e-mails, digital dictionary, internet and others that allow learners to easily access learning materials at any time and place, thereby overcoming the challenge of inadequate language practice and lack of language exposure (Ohuod and Mohamed, 2016). For instance, the use of SMS in vocabulary learning has been proved to improve learners' performance. Vocabulary Learning System facilitates ESL learning by adding suppleness with stronger motivation for vocabulary learning and also helps in creating a virtual interactive classroom (Begum, 2011). Digital dictionary is one of the mobile applications commonly used among learners and has been considered effective tools for vocabulary learning. It includes the meaning, translation and a few explanations as conventional dictionaries. Large amounts of vocabulary learning system have been developed and used to help learners develop their vocabulary knowledge (Deng and Shao, 2011). Onasanya, Ayelaagbe & Bello (2013) are of the opinion that vocabulary learning programmes which runs on MMS via mobile phones improves learners' acquisition of English vocabulary more than traditional vocabulary learning tool like flash cards.

In spite of this information, there is a challenge in the use of imported ICT tools when their content is foreign to the learners' culture and context. The focus of this study is not only to import these technologies (Talking Book and Mobile Phone) into the teaching of English vocabulary among adult ESL learners but also to develop locally relevant content that specifically address the needs of learners. The instructional content for this study is drawn from topics ranging from: Health, Security, Voting Right, Parenting, Drug Abuse and Farming among others within the Nigerian context based on the curriculum in use, to teach vocabulary acquisition and development which were based on most frequently used words as well as words important for learners survival and success (Curtis, 2006). This is in accordance with Wagner and Kozma (2003) view, as cited in Adelore (2010), that learning technologies must have learning and content at their core. In addition to this, ICT tools for

learning must also be consumer-oriented and context-culture sensitive. It is obvious that most imported technologies for learning and their content do not address the needs of the uneducated masses and are of little use to them (Day and Grewan, 2003 in Adelore, 2010). This fact was established in an experimental study on the effective use of Leap Pad learning system (which was foreign in content and culture) for beginners of English language in adult ESL programme carried out by Adelore (2007). The result showed that in spite of the remarkable growth recorded in letter sound identification for both experimental and control groups which was an indication that the use of technology among adult ESL learners was valuable, effective and motivating, learners complained about the technology pictorial presentation which they found childish and the accent of the speech component of the technology which was highly American and made understanding of the content difficult and cumbersome. It was also observed that facilitators that participated in the study, although professionals, were unable to give much help to learners because of the unfamiliar terms, accents, and the confusion created by some of the pictorial representations on the technology device.

The use of ICT in language learning requires that learners possess a certain amount of ICT knowledge and skill to be able to manipulate the ICT tools effectively for the purpose of achieving the learning objectives. These are knowledge and skills that are related to the use of technologies which determines how learners manipulate ICT devices and resources and how they are used for learning purposes (Isreal & Edesiri, 2013). ICT skill is said to be fundamental requirement for learners to function efficiently and effectively in a virtual learning environment. Therefore, ICT use for language learning and instructional purposes in English vocabulary involves the use of ICT by learners to acquire an integrated set of knowledge and skills to develop their vocabulary knowledge so as to perform effectively in ICT use for learning as well as attain the level of competence and proficient use of English language. Kandasam (2013) stated that learners and instructors need appropriate ICT skills and knowledge to experience meaningful learning. Eyitayo (2013) also observed that lack of basic ICT knowledge and skill make learners struggle with most ICT tools which can discourage them from achieving maximally and from functioning well in the subject area through the use of ICT (Sarfo, Amartei, Adentwi, & Brefo, 2011). Studies have shown that adult learners sometimes feel uncomfortable or tend to be anxious towards

ICT use for learning purpose due to low ICT skill (Adedoja, Adelore, Egbkhare and Oluleye. 2013), hence the need for considering ICT skill in this study.

At this point, it is worthy of note that there are some variables (such as age, gender, location, occupation, educational background among others) that seem to influence the use of ICT among its users as revealed by literature. The aim is to examine the effect of two of these variables (Gender and Age) on adult learners' learning outcome in ICT-based English vocabulary in Oyo state.

Gender divide in ICT use is an area in which scholars have different views. Literature shows that gender plays a key role in understanding the differences in perceptions of the usefulness of ICT. Various studies have been undertaken to investigate the effect of gender on learners' attitudes to ICT use which revealed that male learners had more positive attitudes towards ICT use than female learners (Rhema and Miliszewska, 2014). However, Egbo and Colleagues (2011) concluded that there is an acceptance of ICT use among the female folks than their male counterparts. Suri and Sharma (2013) found no gender differences in relation to attitudes towards ICT use. These results are in line with findings from some recent studies which revealed that the gap between men and women on ICT use (gender divide) is narrowing (Fabunmi, 2012, Aremu and Fasan, 2011, Rhema & Miliszewska, 2014).

However, there is a wealth of research on male dominance in ICT use in developing countries like South-Asia and sub-Saharan Africa (Sarfo, Amartei, Adentwi, & Brefo, 2011, UNESCO, 2014). Gillwald, Milek, and Stork (2010), reported that in rural Gujarat in India, the impact of ICTs on rural livelihoods showed that men used mobile phones more frequently than women. According to them, this is likely to be a function of social and financial consideration that correlates with unequal gendered accessOne of the objectives of this study is to investigate this assertion by examining the moderating effect of gender on adult learners' learning outcomes in ICT-based English vocabulary in Oyo state.

Another variable and its effect on adult learners ICT use to be investigated in this study is age. In the digital divide research, older adult users have been found to lag behind others in ICT use (Chang, Shieh and Liu, 2012). When comparing the rates of digital disparity among different age categories, the digital disparity for older females was seen to be the most serious. In a study by Shieh and Liu, (2012), older women's utility rate of ICT

fell below that of men. This situation was also found in Taiwan where ICT usage rate of older adult fell as age increases and the women fell behind men in the age group while that of the youth and the middle-aged rises. (Research, Development and Evaluation Commission, RDEC, 2010).

Having considered the relevance of adopting and integrating ICT into English vocabulary instruction and its ability to increase access to instructional materials, support language learning anywhere, anytime; improve and develop learners' vocabulary knowledge, it has become necessary to advocate its integration into adult literacy and language programmes in Nigeria and especially in Oyo state. To this end, there is need to examine the effect of ICT-based instructional tools on the learning outcomes of adult learners in English vocabulary in order to establish its usefulness to adult literacy education. The aim of this study is to examine the effects of Talking Books and Mobile Phones on the learning outcomes of adult learners in English vocabulary in Oyo state.

1.2   Statement of the Problem

Vocabulary knowledge is regarded as the core building block needed to achieve success in learning any language. This is particularly true of English language that has a vast amount of vocabulary that need to be acquired by learners so as to gain competence and proficiency in its use. However, vocabulary acquisition and development tend to be the greatest challenge adult learners face in learning English as second language as learners often show insufficient vocabulary knowledge in production and usage. This has been attributed largely to the open-ended system of vocabulary and vocabulary learning strategies that are employed in adult English as second language programme. Due to this enormous challenge, research has suggested that ICTs should be used as learning tools in improving efficiency and performance when teaching English vocabulary among adult English as second language (ESL) learners. However, studies which have documented the effectiveness of using ICT in teaching English as second language among adult learners did so with little consideration on the need to develop local contents within the context and culture of the learners which help to bring local realities and relevance to learners' lives rather than using the foreign content which often create the problem of context and culture insensitivity adult learners face when they use imported technologies for learning.

This study is an offshoot of studies that have been carried out on ICT and English as second language learning among adult learners. It is, however, different in that it involves the design and development of an instructional package with locally developed content drawn from societal issues that are familiar and relevant to learners' need and experience based on the curriculum in use. This ICT-based instructional package was deployed on two ICT tools, Talking Book and Mobile Phone, and tested on adult ESL learners to determine their ability to improve English vocabulary knowledge of adult learners. It also examined the use of Talking book and mobile phone in improving adult learners' ICT skill as well as ascertaining adult learners' attitude to ICT use in Oyo state. The moderating effects of gender and age were also determined.

1.3   Objectives of the study

Generally, the study examines the effects of Talking Books and Mobile Phones as instructional tools on adult learners' learning outcomes in English vocabulary in Oyo state. More specifically, the study attempts to:

1) Design and develop ICT-Based instructional package to be employed in the teaching of English vocabulary among intermediate adult ESL learners in Oyo state.

2) Investigate the ICT tools used for instructional delivery in adult literacy programme in Oyo state

3) Determine adult learners' experience using Talking Book and Mobile Phone for learning English vocabulary.

4) Discover the relevance of the ICT-based instructional package to learners' need and experience in learning English vocabulary

5) Investigate the effect of ICT–based instructional tools on adult learners' academic achievement in English vocabulary, ICT skill and attitude to ICT use.

6) Ascertain the effect of gender and age on adult learners' academic achievement in English vocabulary, ICT skill and attitude to ICT use.

7) Ascertain the effect of ICT–based instructional tools, age and gender on adult learners' academic achievement in English vocabulary, ICT skill and attitude to ICT use.

1.4   Research Questions

These research questions were generated:

RQ$_1$ What are the ICT tools used for instructional delivery in adult literacy programme in Oyo state?

RQ$_2$ What is the post treatment experience of adult learners on the use of Talking Books and Mobile Phones as instructional tools for learning English vocabulary?

RQ$_3$ What is the mean gain of adult learners according to treatment in academic achievement in English vocabulary, ICT skill and attitude to ICT use?

RQ$_4$ What is the post treatment relevance of instructional package to learners' need and experience in learning English vocabulary?

1.5   Hypotheses

These null hypotheses were formulated and tested.

Ho1   There is no significant main effect of treatment on adult learners':

   a) academic achievement in English vocabulary

   b)   ICT skill

   c) attitude to ICT use

Ho2   There is no significant main effect of gender on adult learners':

   a) academic achievement in English vocabulary

   b)   ICT skill

   c) attitude to ICT use

Ho3   There is no significant main effect of age on adult learners':

   a) academic achievement in English vocabulary

   b)   ICT skill

   c) attitude to ICT use

Ho4   There is no significant interaction effect of treatment and gender on adult learners':

   a) academic achievement in English vocabulary

   b)   ICT skill

   c) attitude to ICT use

Ho5   There is no significant interaction effect of treatment and age on adult learners':

a) academic achievement in English vocabulary

b) ICT skill

c) attitude to ICT use

Ho6   There is no significant interaction effect of gender and age on adult learners':

a) academic achievement in English vocabulary

b) ICT skill

c) attitude to ICT use

Ho7   There is no significant interaction effect of treatment, gender, and age on adult learners':

a) academic achievement in English vocabulary

b) ICT skill

c) attitude to ICT use

1.6   Significance of the study

The result of this study would provide insight into the use of ICT among adult learners enrolled in adult literacy programmes in Oyo state. This study is significant in that it would provide insight on how to help adult learners to be actively involved in the learning of English vocabulary; access learning materials and to learn anytime, anywhere. It would also provide them with additional knowledge and skills in the use of two ICT tools (Talking Books and Mobile Phones) available to them. This would help in bridging the barrier of digital divide among adults by equipping them with ICT skills so as to fit into this modern world of technology.

It is expected that the results of this study would engender concerted efforts from Federal Ministry of Education and National Information and Technology Development Agency (NITDA) to effectively implement the provision made in ICT policy on the need for the integration of ICTs into the mainstream of education. It is also expected that this implementation will include adult literacy programmes until a National ICT Policy on Education is formulated that would make definite provision for ICT use in adult and non-formal education. This would help in enhancing the learners' potentials and ability to

function in the world of modern technology and harness their potentials towards achieving sustainable development.

More importantly, it would help the Federal Ministry of Education and National Information and Technology Development Agency (NITDA) to see the need to formulate National ICT Policy on Education. The findings of this study would enable the bodies saddled with the responsibility of providing and managing adult literacy education in the country and in Oyo State to design programmes that incorporate the use of new ICTs into adult literacy and language education programmes.

This study is carried out from the background of the use of ICT in adult literacy education. Findings from the study are anticipated to provide empirical basis for assessing the relevance of ICTs use in English vocabulary amongst adult learners in adult and non-formal education in Oyo state. Finally, it is anticipated to serve as a springboard for further investigations by other researchers.

1.7   Scope of the study

The study covered the effects of two ICT-based instructional tools: Mobile Phones and electronic Talking Books on the learning outcomes of adult learners in English vocabulary. The choice of these two instructional tools was based on their capabilities for helping ESL learners to access language materials and to learn anywhere, any time and at their own convenience; to facilitate, support as well as improve English vocabulary learning. There is need to improve and support English vocabulary learning among adult ESL learners through the use of ICT because learners are continually faced with some challenges which discourage them and result in poor production and use of English language as a result of insufficient vocabulary knowledge. Three literacy centers from Moniya, Shasha and Bodija were involved in this study and this is because they have the required number of learners that constituted the three groups needed for this study. The learners from intermediate class were selected to be part of this study because it was expected that learners in this class would have acquired the ability to read at least simple text that would afford them the opportunity to follow the instructional guide that was provided for them which also helps them to engage in independent learning. This study was restricted to Oyo state because it has a large size of adult population that is non-literate in English language.

1.8   Operational Definition of Terms

Adult Learners: These are intermediate adult learners from the age of 15 and above that enrolled in adult literacy programme in Oyo state.

Age: This is classified into young people and adult:

Young People in this study means intermediate adult learners between the age of 15 and 55 who are enrolled in adult literacy programme in Oyo state.

Adults in this study means intermediate adult learners between the age of 56 and 75 who are enrolled in adult literacy programme in Oyo state

Gender: This is both male and female adult learners in intermediate class enrolled in adult literacy programme in Oyo state

Information and Communication Technology (ICT): In this study ICT are mobile devices: Talking Books and Mobile Phones used for the teaching and learning of English vocabulary among intermediate adult ESL learners in Oyo state.

Instructional Tools: These are Talking Books and Mobile Phones used in the delivery of English vocabulary content in intermediate adult learners ESL class room

Learning Outcomes: This indicates adult learners' achievement in, attitude to and ICT skill in ICT-Based English vocabulary. In this study academic achievement, learners' attitude and ICT skill would mean:

Academic Achievement: This is the performance of intermediate adult learners' in the pre and post test scores in English vocabulary test.

Attitude towards ICT-based Learning: This refers to intermediate adult learners' opinion, beliefs, feelings, emotions towards using Talking book and mobile phone to learn English vocabulary.

ICT Skills: this is the ability of adult learners in intermediate class to use keyboards and navigate through ICT-based Instructional package for the purpose of learning English vocabulary.

Mobile phones: These are smart phones mobile devices that adult learners in intermediate class can use to assess English vocabulary instructional that is not dependent on time and place.

Talking books: Talking book for this study means simulated book that features English vocabulary content for adult learners in intermediate class and hypermedia such as texts,

illustrations, highlighted texts, narrations and buttons to touch to navigate through the pages of the book

English Vocabulary: This refers to the amount of English words that adult learners in intermediate class would acquire and use in communication through the use Talking Book and Mobile Phone

CHAPTER TWO
LITERATURE REVIEW

The focus of this chapter is on the review of literature related to this study and on the theoretical framework on which this study is hinged. The purpose is to provide a foundation, logical reasoning and explanation for examining the effect of ICT-based instructional tools on adult learners' attitude and performance in ESL reading in Western Nigeria. These are discussed under the following headings:

Conceptual Review:

Information and Communication Technology (ICT)

Adult Literacy Education

English Vocabulary

Attitude

Achievement

The Impact of Information and Communication Technology in Education

ICT and Adult Literacy Education in Nigeria

ICT and English vocabulary

ICT Use in Adult English as Second Language Programme

ICT and Learners' Attitude

ICT and Learners' Achievement

Learners' ICT Skill

ICT Use and Gender

ICT Use and Age

ICT-Based Instructional Tools for English vocabulary

Talking Book as ICT-based instructional tool in English vocabulary

Mobile Phone as ICT-based instructional tool in English vocabulary

Appraisal of Literature

Empirical Review

ICT and English vocabulary

ICT, Gender and Attitude

ICT, Age and Attitude

ICT and Learners' Academic Achievement

Theoretical Framework

Constructivism Theory

Conceptual framework

2.1 Definition of Concepts

2.1.1 Information and Technology Information (ICT)

ICT is described as various technological instruments and resources used for the keeping and dissemination of information such as computers, radio, television and telephone. These tools work together to make the 'networked world' with huge facilities of interrelated services spread throughout the earth (Tinio, 2002). The World Bank defines ICT as a set of devices which aid the preparation and dissemination of information (Rodriguez and Wilson, 2000). ICT also refers to equipment employed by people to collect and share information through computer networks (ESCAP, 2000). According to Marcelle, (2000), ICTs is as multifaceted and diverse set of devices, and services used for the management of information including telecommunication, television and radio broadcasting. ICT also include hardware and applications, and other electronic media. It is a collection of related technologies distinguished by their function as means of accessing information,

2.1.2 English Vocabulary

Vocabulary is regarded as the knowledge of words and word meanings or the extent of word meaning (Rhonda and Shahreen, 2016). It is the entire list of words required to convey thoughts and represents exact meaning of the speaker (Alqahtani, 2015). Vocabulary development is a vital rudiment in the use of a second language in a learning environment. It is an indicator of language ability without which communication is impossible. A good knowledge vocabulary is required for learning a second language (Liu, 2016).

Second language learning requires vocabulary items which are important for the acquisition of language skills.

2.1.3   Adult Literacy Education

Adult literacy as a concept was coined from that of literacy. In order words, it is an integral part of literacy that is concerned with the adults. Adult literacy, therefore, is concerned with the individual adults' ability to employ the language skills functionally and to compute simple arithmetic. Adult literacy programme is classified into basic and functional literacy programmes. While the former is intended for equipping learners with basic language and computational skills, and social awareness, the latter has to do with the teaching of these skills including vocational skill. This is to make learners employable and relevant in other areas of life on completion of training. Reading, writing, arithmetic, cultural literacy and English as second language are identified as core components of adult literacy programme that would ensure functionality (Nwafor & Agi, 2013).

2.1.4   Attitude

Attitude is a very important parts of social functioning and has been extensively studied. It is viewed as a psychological and neural state of willingness, which is defined by experience and exert influence upon the people's response to things and circumstances. It is a concept which helps to predetermine a person's response to situations and how behaviour is influenced (Sarfo, Amartei, Adentwi & Brefo, 2011). Ayebi-Arthur (2010) described attitude as the learned predispositions to react to particular objects, situations, ideas or persons either positively or negatively.

Roussos (2004), opined that attitude is key in the use and acceptance of ICT. It is an individual factor which influences an individual on ICT use. This is because the attitude of ICT users may influence their use of ICT because there is connection between experience levels and positive attitudes towards using ICT devices (Yunnus, Lubis and Lin, 2009). Attitudes toward ICT use have been explained as a person's general assessment or feeling about ICT, computer and Internet related activities which also measure an individual's capabilities for effective learning. Positive attitudes toward ICT enhance learning and associated activities in educational context (Abedalaziz, Jamaluddin and Leng, 2013).

2.1.5   Academic Achievement

Academic achievement, as described by Boyd (2012), is measured through such formal assessments as tests, quizzes, and examinations. According to him, learners are assessed based on their abilities to recall and marks are awarded according to choice of answers. Learners' achievement may also be assessed from performances in projects, portfolios, or learning logs. This is known as summative assessment measures done purposely to determine learners' level of understanding of a present material. This enables learners to improve on their learning outcomes. Academic achievement could also mean learners' performance in standardized and non-standardized assessments based on the content studied (Cheema and Zang, 2013).

Boyd (2012) reinstate the fact that the connection between ICT and academic achievement can lead to remarkable gains in learners learning and leads to noteworthy improvements in statutory text or examination, advancement of broader forms of social, cultural and intellectual capability.

2.1.6   The Impact of ICT on Education

Yusuf and Yusuf (2009), Sharndama (2013) and Aremu, (2014) described ICT as activities added electronically for gathering, storing, analysing, distributing and presenting information and to get feedback. ICT include such technologies as radio, television, video, DVD, telephone, satellite systems, computer and network hardware and applications and related services (UNESCO 2006).

The impact of ICT on education cannot be underestimated. Researches and literatures have highlighted some of its roles. For instance, ICT has been discovered to support learning environments where ICTs are used to sustain a learning environment or support learners (Mevarech and Light, 1992). Also, it can be used to offer the support required to extend the potential for creating learning environments (Newhouse, 2002). Tinio (2002) agreed that when ICT is employed to aid learning, it increases accessibility to, significance and quality of education through an active education process in real life situation.

Studies have shown that ICTs are tools used for convening and disseminating knowledge to learners. Adeosun (2010) noted that ICT as learning tools is useful for

acquiring, processing and disseminating knowledge; it also makes codification and delivery of learning activities possible anywhere, and anytime. He further noted that ICT influences the quality of education through the provision of participatory, interactive and engaging content. It can help learners to increase, develop and deepen their literacy skills and provide opportunities for individualized instruction which also helps learners to associate school experiences with actual life situation. According to UNESCO (2014), ICTs have the potentials to contribute to effective and quality teaching and learning of literacy and numeracy by expanding access, motivating learners to engage in learning, as a lifelong activity.

According to Adeyemi and Olaleye (2010), ICT has been discovered to have the capabilities to advance acquisition of skills that are essential for successful living in the contemporary world. While Kolawole and Olatunji (2006) argued that using ICT for the purpose of learning increases learners' motivation for learning, Olagunju and Ojo (2006) noted its influence on content and on teaching and learning methodology and how it has transformed how education is managed (World Bank, 2002). ICT has introduced novelty into teaching and learning practices and has contributed immensely to the transformation of the education system. It has helped in empowering instructors and students by promoting the acquisition of skills that are required to work effectively in the 21st century (Yusuf and Yusuf, 2009).'The use of ICT by teachers have provided learners with the opportunities to become part of the knowledge age by equipping them to be future workers and clients that have basic skill and understanding essential for their work. Schools have become more resourceful and dynamic by incorporating ICT into their educational process thereby providing diverse tools for improving teacher's specialized practices. In addition, it has helped in the reformation of teaching and learning by introducing novel methods (Onasanya, 2009).

According to Mikre (2011), ICT enables students and tutors to adapt educational activities to their needs which facilitates learning and contributes to the improvement of educational systems, policy formulation and execution, as well as widening the range of opportunities for business. Mikre further noted that ICT use in education encourages learners' active participation thereby reducing the role of the teacher to a supervisory one.

Research findings in many countries have shown that ICT has the ability to enhance educational standard and to tackle illiteracy particularly using the multimedia tools like simulations and models which broadens learners' learning scope (Selinger, 2010). According to Aremu (2014), ICT encourages use of interactive reaching resources relating to specific topics, and helps in evaluating learners' progress and comprehension of instructional materials.

Ossat & Oyet (2012) argued that ICT-based teaching makes learning interesting, engaging and tasking. It allows immediate responses and feedback from learners, thereby enabling learners to regulate their learning pace and to experience quality learning as well as stimulating experimentation thereby increasing moderation. According to Adomi and Kpangban (2010), use of ICTs provides a different modality of instruments that promotes individualized learning among learners. In learning environment where ICTs are deployed, students are able use diverse tools suitable for their attention span and ensure instant response to teaching and learning progress. As an instrument, using ICT to learn changes how learning is done and learners themselves because of its capacity to encourage participatory learning (Hawkey, 2002).

Adeosun (2010) has observed that using ICT for education has improved the process and learners' skills and productivity. Yusuf and Yusuf (2009) viewed ICT use in education as a platform that gives opportunities for the underprivileged who are not opportune to be in the formal school system to access education. ICT devices have features that motivate learners to learn through various skill-enhancing methods and tools. (Fillip, 2002).

ICT-enhanced distance learning provides and promotes flexible and collaborative learning and quick feedback between learners and knowledge conveners (World Bank, 2003) and provides quality and supportive education for people with disabilities. (Jurich and Thomas, 2002) Kwan, McNaught,Tsang, Lee and Li (2011) specify the importance of ICT use in education as resources as including provision of applications that enhances quality of education without border. Researchers have also established ICT's capability to expand learners' content knowledge, ability to participate in constructing new content, and improve their reasoning skills (Kozma, 2005). According to Gay and Blades, (2005) ICT promotes higher order thinking skills and deepen understanding in all learning areas.

Undeniably, ICTs have had great impact on all aspects of education including research and instruction and enhanced the quality of education. This has been confirmed by many educators who claimed that if ICT is properly employed by learners for education processes they can assist teachers to determine and take care of the existing knowledge of learners. They can also help learners to engage in deep and creative learning that is relevant to real life situations.   (Newhouse, 2002). Nwosu (2003) noted that ICT helps the management of schools especially when it concerns curriculum and teaching, interaction among staff and students and other school activities. See also Mohammed (2006). It is noted that through ICT use, learners tend to extend learning outside the classroom setting and deepened their understanding and research activities as the need arises. (CEO Forum on Education and Technology, 2001).

A research study which was conducted by Olszak (2015) revealed that changes occur in classroom activities when ICT tools are deployed for learning and that it motivates learners to attend to their literacy tasks leading to independent study by learners with minimal help from teacher.

2.1.7   ICT and Adult literacy Education in Nigeria

Many Nigerians are functionally illiterate (Nwabuko, 2012) and this has been recognised as one of the hindrances to rapid development in Nigeria. In other to tackle these problems, there has been much emphasis on the importance of ICT in the facilitation of mass literacy. Unfortunately, ICT usage in education is at an infant stage in the country. The Nigeria National ICT policy stated as one of its objectives the importance of ICT in education in the country. This, however, has not been implemented. The National Planning for Adult and Non-Formal Education emphasizes the responsibility of the federal government through relevant agencies to introduce (ICT) into literacy education in Nigeria. But efforts of the government, her agencies and private stakeholders at incorporating ICT into the education systems has not trickled down to adult and non-formal education (Nwabuko, 2012). Notwithstanding this challenge, there was an agreement (an MOU) between the National Mass Education Commission (NMEC) and state governments to establish Literacy by Radio in all the states in 2007. But the programme has not been effectively run. Apart from this, there is no definite ICT policy in adult literacy education

(Nwabuko, 2012). Another challenge to the use of ICT in literacy education is the lack of clear definition of its role in Adult literacy education and the inconsistency of the relevant agencies of government.

2.1.8   ICT and English Vocabulary

The use of ICTs to improve vocabulary knowledge for achieving successful learning of any language is a current issue among language educators (USAID, 2014). Learning vvocabulary is an indispensable aspect of second language teaching and learning. Vocabulary has been described as collection of words in a language and their meanings which are necessary for effective communication. (Alqahtani,2015). Although, the significance of vocabulary knowledge to language learning has been underscored by scholars as the bedrock to achieving success in learning any language, reports show that second language learners are faced with the problem of developing and improving their vocabulary knowledge. Due to this, there is a growing emphasis on proficiency in vocabulary development among ESL learners mainly because of the indispensable role it plays in successful achievement in language learning. As a way of developing and improving vocabulary learning amongst ESL learners who are constantly faced with the problem of developing their vocabulary knowledge, it has been suggested that ICT should be integrated into the domain of vocabulary instruction as learning tools to foster vocabulary acquisition and development (Liu, 2016).

There is evidence that employment of ICTs has changed vocabulary learning startegies. Igwe, Chimah & Nwachuku (2012), observed that ICTs utilisation for vocabulary instruction and learning creates a feeling of adventure for children who relate vocabulary learning with fun and using devices like Picture Books which are multimodal helps in sustaining children's interest and attention and helps them to recognize objects in contexts. Kim (2011) asserted that employing ICT in an English vocabulary classroom improves learners' performance and encourages class participation. Vahdany and Majidi (2015) also investigated the effects of ICT usage in vocabulary instruction on vocabulary acquisition of Intermediate Iranian EFL learners. Their finding shows outstanding improvement in retention skill of those employ ICT. Findings further showed that ICT fosters autonomy, capability, and creativity in students and provides an immediate opportunity for feedback for

learners. Tayebinik and Puteh, (2012) are of the opinion that the combination of ICT and educational multimedia courseware in language education helps to promote instructions in English vocabulary.

ICT, as instructional tool for vocabulary learning, provides platform for multimodal leaning of vocabulary. It improves cognition as well as supplements and supports instructors by enhancing their lessons (Nwabuko, 2012). According to Igwe, Chimah & Nwachuku (2012) ICT facilities and audiovisual resources assists children to learn diverse aspects in vocabulary instruction. They enable children to explore the world broadly. ICTs, according Oladunjoye (2012), are having very strong impact on all aspects of language learning. They assist learners to acquire language competency and to improve the quality of their learning experience. ICT tools like wikis, blogging and social networking are useful tools for language learners to improve their vocabulary knowledge.(Tayebinik and Puteh, 2012).

Observational studies have shown the usefulness of ICTs as instruments for the sustenance of language education. ICT use does motivates learners' language learning and also enhances interaction in the classroom (Liu, 2016; Wang, Teng and Chen, 2015). In a study carried out by Yuksel & Tanriverdi (2009) on the use of ICT in the teaching of vocabulary, they explored the effects of watching captioned movie clips on vocabulary development of learners of English as foreign language. From the findings, it was discovered that viewing the movie clips helped the participants to build their vocabulary knowledge, and facilitated the reading process. A result from a study to observe the technology students; the classroom dynamics and student and teacher perceptions on technology use revealed that students were motivated on task, and were attentive when working on their literacy tasks (Olszak, 2015). Besides, the learning technology allowed students to develop dependent learning style and to build confidence in vocabulary use as well as using technology. Both teachers and students commented on the fact that they saw skills and confidence being built. Analyses of student performance showed that students' performance improved in the classes where technology designed for learning purposes was used.

In a study carried out by Olszak (2015), on the integration of ICT into English vocabulary learning, it was observed that vocabulary learning was facilitated through ICT. The study also emphasized the significance of ICT tools in developing learner' vocabulary

repertoire and showed that ICT-based vocabulary learning was influenced in three aspects, namely interaction with text, attention to personal needs and autonomy through ability to comprehend texts. Olszak (2015) reported that access to new ICT tools enables teachers to create the most suitable conditions for acquiring and developing vocabulary knowledge. He postulated that ICT can be used to stimulate different tasks in the ESL classroom including preparing students to become life-long users of the language

According to Yunnus et al (2013), captivating students' attention, enhancing students' learning process, improving students' vocabulary knowledge and promoting meaningful learning were the advantages of using ICT in teaching ESL. Jonassen, Pek and Wilson (1999), stress the great benefits ICT has when integrated into learning a target language to include increasing students' interaction in the form of exchanging, discussing and negotiating utterances and information to construct their knowledge about the target language.

2.1.9   ICT and Adult ESL Programme.

Learning Second Language involves complex process of decoding and comprehension especially for non-literate and late learners of second language. Available information on second language learning generally derives from existing studies with children. The processes involved in second language acquisition in children were investigated and the result showed the necessity of awareness of phoneme and grapheme-phoneme for learning to read and write. Researches conducted with adults learning to read for the first time in a second language revealed similarity in their developmental patterns of learning and those of children leaning second language. However, adult learners demonstrated some individual peculiarities and advantages. Non-literate learners and those literate in another language are differences in their reading approaches (Boon, 2010).

Learning English is very important in a multi-lingual society like Nigeria where English language is the official language, language of trade, education, technology and the means of gaining access to the developed world (Begum, 2011). There is a great focus on the teaching and learning of English in Nigeria because none of Nigeria's indigenous languages has assumed the status of an official language; English continues to serve as the

official language. Nevertheless, the instruction and learning of ESL has become easier and more attractive through the use of ICT (Tayebinik & Puteh, 2012).

Integrating ICT in instruction for adult English language learners has been found helpful in presenting the suppleness needed to extend learning beyond that which is obtainable in a formal programme. It has also increased chances for language and literacy learning (Cummins, Brown and Sayers, 2007). ICT provides access to new prospects for interaction among learners and between facilitators and learners. The use of ICT in adults' learning of English as second language reduces the digital divide that exists among adult learners in the modern world of technology by helping them to develop a basic knowledge and skills of ICT as well as facilitates their progress toward proficiency in English (Moore, 2009).

Aljabre and Frederick (2012) note that the use of technology in adult learners ESL programme has served both facilitators and learners and contributed to ease of access. The use of interactive board, wikis, blogs, and other Internet tools have taken the ESL classroom out of its original rigid context and made it supple; is also used as a means to create meaning for ESL adult learners. They observed that technology has brought life to visual aids which have long been proven necessary tool for ESL facilitators. Visual aids that were once two dimensional, flat and boring come to life with ICT. Audio-visual allows for ease of transfer and deepens connections to enhance the learning experience. It does not replace real or genuine experiences, but helps to reproduce them when the real thing is inaccessible. For instance, interactive language software allows learners to practice grammar, reading, writing, listening, and speaking skills. CD-ROMS have also been found to be helpful in supporting adult ESL programme. CD-ROMs designed for ESL learners provide intensive practice in listening comprehension, speaking and pronunciation, reading comprehension, writing and dictation which are the rudiments of English grammar and vocabulary development (Wagner and Kozman, 2005).

Moore (2009), talks about three ways ICT can be used to improve adults' learning of English as follows: onsite uses, blended uses, and online uses. She also described specific ICTs and programs suitable for adults' learning of English.

Onsite Uses

Onsite usages of ICT entail learning which occurs in the classroom or computer laboratory in a tutor-facilitated learner group. ICT-centered activities typically function as an add-on to the main curriculum; they are usually done in regular lessons period. Computer-assisted instruction (CAI) is an example of onsite usage of ICT that involve the employment of computers, internet or software programme to offer genuine and interactive avenues to learn language (vocabulary and structure). This practice is enhanced by computer-assisted language learning (CALL), software that are utilized in ESL adult settings include: (1) *The New Oxford Picture Dictionary CD-ROM,* (2) *Rosetta Stone,* and the (3) English *Language Learning and Instruction System.*

The first software consists of not less than 2,400 words arranged into subject such as people, housing, and food, each of which is separated into numerous subject matters. The CD-ROM consists of sound, animation, interactive exercises, games, and assessments.

The second software has been modified for suit English learners at various stages such as at K–12 stage, adult education stage, and post-secondary stage. This improves learning of English through the use of interactive lessons. Learners learn English and develop learning plans which aid their comprehension of new words contextually which they are likely to come across later in the software.

The third software was discovered in 2001 and employed as a learning package for the enhancement of adults' acquisition of English language. Currently, this comprises *ELLIS Essentials* and *ELLIS Academic.* This ICT was designed to targets secondary school and adult learners. It entails lessons which were planned so that learners can hear discussions in everyday situations and explanation of vocabulary and the structures of the grammar of the language, thereby enabling an experiential use of materials in live situations. Learners are able to operate recordings at various tempo; they can also record and play back their own language.

Blended Uses

In blended uses, ICT functions as add-on to the main curriculum and utilized inside and outside class setting tutor. ICTs such as the computer-mediated communication (CMC) and Web-based learning are software used for this purpose. In blended ICT-based learning programme, there is interaction among learners virtually; they also interact with learners in

different programmes and locations. Examples of this kind of learning are: Project-based Web learning, Webquests, and Web-based game. Web-based learning requires certain levels of literacy for it to be used successfully. Therefore, in web-based learning, facilitators consider their learners' ability to participate before adopting Web-based learning.

Project-based Web learning requires that learners work together on mainly internet-situated projects in which they may need to use e-mail and word processing. While doing these learners perform important language tasks demanding reading and writing. They may also post their final products on the Web for use in future projects and collaboration.

Webquests concerns team work and investigation. It concerns the retriever of information and resources from the Internet. Webquests is aimed at promoting learners' commitment through teamwork and the originality of topics and activities. Learning in webquests is facilitated through guidelines which list specific Web sites that can be visited by learners so as to complete the project. Adult learners are particularly involved in the acquisition of life skills including literacy, child nurture, or rights advocacy. Webquests is useful for adult learners who are from diverse background because it enables learners to engage in language and literacy interactions. Webquests is particularly useful for learners with good oral language skills but are not literate. *Web-based games* are suitable for beginner adult learners of English language. It is also useful for parents who want to work with children who are learning English; it is accessible in or outside the classroom. Examples of Web-based games are crossword puzzles; games based on grammar, vocabulary, and spelling; matching games and hangman.

Online Learning

This is exclusively Internet-based. Although may involve facilitators, there are rarely meetings between facilitators and learners onsite. Communication between them and the transmission of instructional content take place online. Online learning is also known as computer mediated distance education (CMDE). CMDE makes it possible for adult learners of English to do so wherever they want. Examples include *English for All, USA Learns,* and *Learner Web.*

English for All provides free membership and self-directed lessons for adult. These lessons are meant to assist them to acquire necessary language and life skills including grammar, reading and vocabulary. It can be adopted for teaching adult learners of English

from beginners to the advanced stage. In this learning programme, videos are used alongside vocabulary and grammar lessons. Although these may not be as interactive as other activities, they are useful to language education; they are designed to motivate learners who are self-starters.

USA Learns is a Web portal designed to be used by adult learners of English freely. It provides programmes for beginner, intermediate and advanced English proficiency levels. It also offers online membership. Depending on the level, learning of new words is accompanied by pictures, audio, video, or written definitions. Each lesson is presented alongside short video and some new words. Thereafter, learners are expected to complete quizzes involving cross-matching of these new words with the right picture or meaning. These lessons are written around important life skills.

Learner Web is also free. It is an Internet application that makes provision for aspiring adult learners especially of English by making available to learners online and onsite support via its community-based organizations. Learners apply by completing personal profiles including indigenous language and reasons for taking part in the programme. This is followed by other activities that must be done online. Mostly, the application is meant for adult learner of English in need of supplementary coursework. The application is peculiar because of the support it provided for learners.

2.1.10 ICT and Learners' Attitude

There have been various studies on people's (learners, tutors and adults) attitudes to ICT use and findings have shown that those (mostly youths) who had prior experience of electronic devices show some level of confidence in ICT use and are ready to adapt to new applications of ICT unlike adult users and leaners who have speculative barriers to ICT use and other emerging computing systems and thus a different attitude than high-school and university students (Jimoyiannis and Gravani, 2011). Chou and Shieh (2011) pointed out that learners in tertiary institutions tend to show positive attitudes and less fear towards ICT use while older adults learners exhibit anxiety towards ICT use (See also Laguna and Babcock (1997)). Similarly, Hilbert (2011) revealed that women on jobs are more active in the use of ICT whereas housewives exhibit nervousness towards ICTs learning and use (Nakatani and Miyamoto, 2006).

A study by Kubeck (1999) revealed that older adults had issues with learning to use ICT and the technicality involved in ICT use but relaxed and become more fascinated with its use than the younger adults after their experience in learning to use ICT. In their study on the comparative attitudes of young and adult learners who own computer and those who do not, towards ICT after training on computer use, McInerney, McInerney and Sinclair (1994) found that although no differences existed in their attitudes pre-training, those who owned computers exhibited more positive attitudes post-training.

In another study by Lin, Tang and Kuo (2007) on the women's attitudes to ICT use in Taiwan, it was observed that older women, middle-aged and elderly women seem to show negative attitudes to ICT use even when they are aware of the importance of ICT skills. Fancovicová and Prokop (2008) also established that the attitude of men and woman to computer use are similar although women are more apprehensive of computer. Onwuegbuzie (2001) observed that young adults were found to show positive attitudes to ICT use which underscored the findings of Oscarson (1976) that relationship exists between the age of learners and their attitude towards technologies, The result revealed older adults were more ICT adoption prone than younger adults. The report from Alduwairej (2014) established that both teachers and young learners exhibited positive attitude to ICT use in the ESL classroom

2.1.11 ICT and Learners' Academic Achievement

Literature has broadly focused on the relationship between ICT use and learners achievement and tried to explain its significance in classrooms situation.

Balanksat, Blamire & Kefala, (2006) revealed that ICT has the potential to positively impact learners' academic performance, especially in language and science. ICT-based instruction has been acknowledged to possess the capacity to improve learners' performance. (Reeves & Reeves, 2008). In Houtsonen's (2003) study of the importance of ICT in geography instruction showed ICT has positive impact on learners 'performance. This shows that ICT enhanced learning is more productive than the conventional learning environments.

The OECD (2003) examined learners' performance and ICT use at secondary level and found that ICT positively affect student's academic achievements. It also showed that

those who use computer regularly performed better in core subjects than those who are not very familiar with basic computer functions. Youssef (2008) showed that there is strong and positive relationship between learners' accessibility to ICT and their performance and that ICT-based instruction is more productive for learners.

The ELNORD (2006) verified the benefits of deploying ICT for use in education and how this affects learners' learning achievement especially in participatory learning. The study also showed that tutors, head teachers and parents perceive positive effects of ICT on learners learning, especially in the acquisition of basic literacy skulls and specific subject areas. ICT is therefore considered by tutors as very effective tool for enhancing learning for both academically strong and weak learners.

Oyedeko and Tella (2010) verified teachers' perception and the importance of ICT to learners' performance and the result revealed that most of the tutors (78.5%) signify that learners did better using ICT in CRE than without it. Arinze and Okonkwo (2012) argued that the adoption of ICT for instructing and learning social studies increases learners' performance in the subject.

Ekpo and lfreke (2001) also investigated learners' performance in physics using Computer Assisted Instruction (CAI). The report showed that CAI has positive impacts on learners' performance. Youssef (2008) examined correlation between students' performance in school and access to computer at home. He found that students with computer at home for learning have improved scores in reading and maths

Begum (2011) found considerable improvements in learners' performance of language tasks as a result of ICT use in the teaching of ESL while Sullivan and Pratt (1996), in their study. compared students of a conventional ESL class with those in an ICT-enabled classroom and found that the use of ICT has impact on ESL learning outcome and on the quality of writing skill. These corroborated other studies on the advantages of ICT use for ESL learners (Skinner and Austin, 1999); for promoting collaboration (Sotillo, 2002); and for grammar lesson (Yuan, 2003).

2.1.12 Learner' ICT Skill

ICT skills refer to those associated with the use of electronic devices and other technologies for dissemination of stored information. ICT skills have become increasingly imperative to ICT use in formal and lifelong education. It determines how learners operate

ICT devices and resources for learning purposes. The ability to use ICT effectively is becoming a crucial part of every learner's education and essential for learners to access, apply information for living in today's world (Isreal & Edesiri, 2013; Eyitayo, 2013).

ICT skills in relation to education and lifelong learning include the ability to use diverse range of technology-related tools and their application to classroom teaching and to the entire teaching and learning process (Rastogi & Malhotra, 2013). Kandasamy and Shah (2013) stated that learners and instructors need sufficient ICT skills and knowledge to experience meaningful learning. Eyitayo (2013) observed that lack of basic ICT knowledge and skill make learners struggle with most computer applications. Insufficient ICT skill makes most learners spend much time on simple ICT-based learning activities, signifying deficient ICT skills. Oftentimes, due to this deficiency learners' use of ICT devices is inept.

2.1.13 ICT Use and Gender

The study of Gender and ICT dates back to the "Women in Technology" movement of some years ago aimed at promoting equal opportunity for both women and men to access gender-neutral technologies. However, women have been challenged to make deliberate efforts to advance themselves technology-wise rather than demanding for special concessions (Wajcman, 2004). Discourses on gender and ICT policy are categorized into two, namely gender issues in access and use of ICTs and gender issues in ICT policy (Hafkin 2002). But this study shall concern itself with the first category.

One of the issues in this category is access to infrastructure. According to Hafkin (2002), a huge gender gap exists in access to ICT today because of the distribution of infrastructure between urban and rural areas where a large numbers of women live; gender demographics show that there are more women in rural areas than men and ICT infrastructures are concentrated in urban areas.

Generally, women have less basic education and knowledge required in literacy, language, ICT skills and information literacy. This is so because, according to EFA Global Monitoring Report of 2012, more women than men are illiterate (UNESCO, 2014). The report showed that the literacy ratio between men and women in the Arab States is put at 85% (male) to 68% (female) while it is 74% (male) to 52% (female) in South and West Asia. Olatokun (2007) observed that in developing countries, men tend to access or own

radio and television as household possession of technology than women. This is attributed to either issue of finance or as in most times hesitation to sacrifice household resources for information. This is underscored by a research survey carried out by UNESCO on reading in a mobile era. The survey report shows that serious gender disparities appear to reflect distribution of ownership of mobile phone in countries surveyed. In low- and middle-income countries, it is 21 per cent less likely for a woman to own a mobile phone than a man. This figure increases to 23 per cent in sub-Saharan Africa; 24 per cent in the Middle East and 37 per cent in South Asia. The gap widens further depending on the sophistication of the phone; it is more likely for men than women in developing countries to own expensive phones that use mobile data (UNESCO, 2014). According to Hafkin (2002), it appears women in rural areas do not have as much access to available ICT facilities as men since most ICT facilities are located where women may not be comfortable to patronise.

A survey carried out by Gillwald, Milek, Stork (2010) in rural Gujarat in India on how ICTs affect rural livelihoods revealed more use of mobile phones by men than women. Similar study by Gender and ICT Network (Rengentic) in West Africa, revealed that women were discouraged from accessing ICT facilities because of crime and insecurity at Public Kiosks in addition to complexity of the technology itself. It was observed that men felt threatened by the freedom that access to mobile phone and internet accorded the womenfolk. It is seen as a threat to their relationships as a result of which most men monitored the cell phones of their spouses and their use of internet.

Attitude is another gender issue in ICT use. Hafkin (2002) stated that attitudes of women studying or using information technology bring about gender disparity in ICT use. This is very critical in Africa where women's attitude towards information technology is transcends formal education as can be seen in a project in Cajamarca, Peru, where both women and men farmers were trained in ICT use. The men ridiculed the women for what the men saw as breaching of gender boundary (Puican 2002).

The RIA e-Access & Usage Household Survey by Schmidt and Stork in 2009 showed that in 9 out of 17 countries, there is likelihood that someone will be disadvantaged in the acquisition of e-skills of been a female. This buttressed the report that there is difference in men and women use ICTs and that gender and age influence ICT use. Men are

believed to be more ICT active than women and younger people than older people (Fallows, 2005, Helsper, 2010).

2.1.14 ICT Use and Age

Research into the digital divide in the use of ICT among age categories showed less use by older adult while older females were least users. A study of 27 EU showed that ICT use of women between ages 55 and 74-year-fell below men's by 10%. Similar result was recorded in Taiwan where ICT usage rate by 12-40-year-old Taiwanese rose above 90% but fell among middle-aged and elderly, especially among women, due to lack of equal opportunity for ICT training.. (Chang, Shieh and Liu,2 012).

In a study carried out by Kubeck in 1999 in which he compared the post-training use of ICT by older and younger adults, it was found that despite the challenge encountered by older adults during training, they exhibited more interest and made better progress post-training than the younger adults.

2.1.15 ICT-Based Instructional Tools for English vocabulary

Talking Books as ICT-based instructional tool for English vocabulary

Talking books as, ICT-based instructional tools for teaching English vocabulary, are electronic texts with embedded speech component that is capable of reading out sections of the text and providing pronunciation of specific words within it. Such books support and coach learners as they read the text of a story (UNESCO, 2006).

Examples of electronic devices on which talking book can be deployed include Leap Pad Learning System, Leap Frog, Big Leap Programme, Tablets and others. The electronic device to be used for the deployment of Talking Book in this study is tablet. Tablets is a small hand-held electronic device that comes in different sizes (e,g 7 inches, 8 inches, 10 inches etc) and developed to enhance reading experienced. It presents greater advantage over a laptop or a desktop in that it is lightweight, portable, spring to live without delay, and possess longer battery life. It can keep huge number of books. It is the best way to show textbooks because it offers enhanced e-books featuring images, videos and audios which may be impossible in prints. Clear text and fonts and sharp display are features of tablets that makes what you see resembles a book page. Tablets are screen touch enabled which encourages immediacy and ease of use of the device and also eases users fear and facilitate

adoption. It helps learners to highlight text, make notes in the margin and access a dictionary directly within the book itself. It also has an in-built keyboard for input and output function (Madan, 2011).

There are many research findings in support of verifiable effects of Talking Book on the learning of English vocabulary. One of its potentials lie in the fact that the support it offers makes vocabulary acquisition possible before decoding reaches a level of automaticity. Furthermore, it seems conducive to the promotion of positive attitudes toward vocabulary acquisition when early experiences are connected with a high level of support, thereby inducing the success of vocabulary learning (Adelore, 2010). According to Leu and Leu (1997), Talking Books and stories that are used in ESL vocabulary classes develop learners' interest and help them to become good readers. Carbo (1978) observed that the use of Talking Book to improve young learners' vocabulary knowledge has a psychotherapeutic effect on learners' personalities and helps them to excel in vocabulary learning compared to previous performance. They also became more interested in reading, more willing to try, and more helpful toward one another.

Vocabulary learning with Talking Books, according to Denise (2003), enhances learners' learning experience through engagement with the content in multisensory ways (e.g., reading and listening at the same time, reading along while the Talking Book highlights each word). It has been verified to be successful in providing a way for learners to access literature and enjoy books. According to Adelore, (2010), Talking Books give the control of whether to read or not to read by children because learners are positioned to explore books on their own through the mediation of technology.

In a study by Carbo (1978) on use of Talking Book in teaching vocabulary with learners having reading difficulties, it was observed that learners made considerable progress in comprehension, word recognition and word meaning. Likewise, after the Talking Book experience, learners appear to have grasped spontaneously and applied phonics rules without formal phonics instruction. Oladunjoye (2012) stressed that Talking Book, a digital reading devices, acts as scaffolds for the children's building of concepts of print in ways similar to conventional adult-child print interactions where the Talking Book plays the role of a skilled reader.

Talking Books seem to act as readiness activity for phonics instruction by helping learners to develop a basic sight vocabulary from which phonics rules may be drawn. It is also effective with young learners with memory problems and/or difficulty learning to read through the phonics approach, and with older learners who, after repeated failure, have giving up reading. It also enable older learners with some reading skills to read material on their language comprehension level, and help them to incorporate rate, rhythm, and natural flow of language necessary for good comprehension. In addition, with Talking Books, learners make fewer reading errors and the chance of copying incorrect reading patterns is reduced. Talking Books provide learners with accurate reading model as well as build their self-confidence and make them more eager to invest further effort in learning to read (Carbo, 1978). Talking Books have the capability to increase the pace of learning to read by offering readers immediate access to a word's pronunciation thereby reducing the learner's need to rely on context cues to understand new words and can also be useful tools for literacy teachers to track words with difficult pronunciations. This system can offer feedback to teachers, enabling them to recognize words that learners' needs assistance with (UNESCO, 2006). Adelore (2007) discovered that learners using Talking Books were more able to read autonomously, probably because the ICT tool provided them with cues to cross-check meanings. Colourful illustrations and animations also motivated them to use the programme on their own.

Mobile phones as ICT-based instructional tool for English vocabulary

Mobile phones as ICT-based instructional tool are effective with learning in several ways especially by using it for tutoring. Mobile phones are considered to be appropriate instructional tool for expanding education in developing regions in many ways. First, they are the most widespread ICT in the developing world, and it is spreading rapidly. For example, in Asia, the spread of mobile phones has multiplied within a short period of time. For instance, in 2001, the average spread was 19.7 per 100 inhabitants while in 2005 the rate of spread rose to 40.9. It is also important to note that mobile phone ownership is becoming increasingly more common among those in the lower socio-economic sections of society. Second, mobile phones are particularly good for 'leapfrogging' since they use the radio spectrum. This reduces the need for new physical infrastructure such as roads and phone

wires, since base-stations can be powered by generators especially in places where there is no electricity. Finally, apart from improving voice communication, mobile phones allow the transfer of data, which is particularly useful for delivering educational content over long distances (Valk, Rashid and Elder, 2010). .

Mobile phones are presently the most essential networked knowledge-exchange technology used in the developing world. The considerations for using mobile phones as potential learning tools are some of the features they possess, such as limited or no dependence on permanent electricity supply, easy maintenance, easy-to-use audio and text interfaces, affordability and accessibility.Tayebinik and Puteh, (2012), emphasized that apart from the technological function of mobile phones, it can also be used as a pedagogical tool for enhancing the teaching of English vocabulary. The use of mobile phones as instructional tools helps to connect learners and teachers and other learners in a learning environment and helps them to deal with the problem of class attendance, rearranging of meetings, retrieval of schedule and assignment data. It also makes it easy for learners and teachers to discuss assignments, coordinate study groups, and to seek help with academic and life problems. It also assists learners with difficult schedules to get more free time and to maximize its usage (Sherman, 2002). Begum (2011) noted that mobile phone technology is a very important means of creating a virtual and interactive classroom for the purpose of learning English vocabulary.

Aker, Christopher and Travis (2010) are of the opinion that mobile phones can create and sustain literacy gains through the powerful network externalities that are inbuilt in ICT generally and in mobile particularly. Mobiles phones make learning activities possible especially during very busy periods of everyday living. They make impromptu learning possible outside the classroom and especially in the environment of home and office. They also allow learning irrespective of time and space and enable learners to make use of what they learn in one environment in another.

In addition, mobile phones encourages learner-centered learning possible in which case learners are able to transfer and access information to improve their skills, increase their knowledge base and which help them to achieve their educational goals. According to Wagner & Kozma, (2005) mobile phones facilitate knowledge-centred learning through resourceful and creative methods by which learners deepen their understanding of specific

subject matters instead of merely memorizing large amounts of information. This knowledge is later used as a basis for new learning through integration and interconnection. Mobile devices also facilitate assessment-centred learning and make it possible for learners to get constant feedback all through the learning process. This provides learners with diagnosis and formative assistance on subsequent lessons. Mobile phones make community-centred learning possible which is very valuable to learners because of its significance to the social context. Community-centred learning is useful for accomplishing socio-economic goals by providing answers to social and economic problems that the community faces such as those associated with health or family care. According to Wagner, Crofton, Murphy, Castillo & Zahra (2014), with the arrival of e-books and social media, young children with access to mobiles phones can learn and become literate. In addition, mobiles phones provide opportunities for learners to create texts by themselves, rather than merely consume them.

Mobile phones allow collaborative learning and continued conversation among learners in spite of physical distance. They thus expand the process of learning, which happens through conversations across contexts and among different people. Via mobile phones, learners engage in discussions which help them to resolve differences, understand the experiences of others, and come up with common interpretations and shared understanding of the world (Sharples, Taylor and Vavoula, 2007). Mobile phones are becoming more extensively used as instructional tools in language learning, particularly in the area of English vocabulary learning as shown in a number of studies (Chen & Chung, 2008; Kennedy & Levy, 2008; Lu, 2008; Stockwell, 2010). A study by Al-Harbi (2008) indicated that mobile phone has a positive effect on ESL learners reading and writing skills. Learners build on natural associations between reading, writing and thinking. Wagner, Crofton, Murphy, Castillo & Zahra (2014), found that learners' constant use of mobile phones for literacy activities has a significant effect on their reading skills. Also the nature of learning using mobiles phones, use of meta-cognitive skills and the ways mobiles affected human communication was described.

Peregoy and Boyle (2012), in their study, found that learners were able to correctly learn English at a faster and more efficient rate using mobile phones to support their reading and writing skills. Their study found that the use of mobile phones, helped learners to be grounded in the language far more than conventional classroom learning. The ability of

learners to employ mobile phones to access the English vocabulary content both inside and outside the classroom means that it opens up a new opportunity of learning for learners in this modern and progressively connected global society. According to them, the use of mobile phones, via online bilingual dictionaries and the use of the Internet assist learners in their learning. There also are applications that support learners with their English vocabulary learning needs, with new touch screen applications helping learners to practice their English vocabularies and becoming more confident in their reading and writing abilities. Begum (2011) undertook an action research to examine how mobile phones improved ESL learners' vocabulary development and learning as well as helping in the assessment of learners' acceptance and usage of it. The results revealed that mobile phone-based vocabulary learning was able to improve ESL learners learning by adding suppleness to learning and providing a stronger motivation for study.

Using ICT tools in ESL classrooms such as mobile phones, internet, and website have been discovered to help learners improve their language and communication skills. Studies show that a supplementary on-line learning environment may enhance language learning and development (Kasapoglu-akyol, 2010). Kukulska-Hulme (2009) examined the effectiveness of mobile phones in task-based learning as a way of connecting what is taught in the ESL classroom to learning outside the classroom. Using mobile phones in the ESL classroom helps learners to connect learning to immediate surroundings. Mobile phones are mainly effective in aiding collaborative learning in small groups. He argues that using the texting function on mobile phones builds vocabulary knowledge. For example, learners can send message to co- learners and their tutor to confirm the meaning of a word. They can visit various websites and connect learning to interactive games and visit sites that promotes social awareness and interaction. The application of mobile phones with multimedia devices in the learning and teaching of English vocabulary creates opportunity for the teacher to bring almost real life situation in to the classroom. It also helped learners to become active users of ICT devices and provided an interactive learning environment (Sharndama, 2013). In an investigation into how far mobile phones can be of use in the ESL classroom, Kiernan and Aizawa (2004) found that texting, employing e-mail for practicing reading and writing, and the use of phones for speaking are exercises for effective activities in the language classroom.

2.1.16 Appraisal of Literature

The literatures reviewed in this study revealed that there are tremendous benefits derivable from using ICT in all forms of education including Adult and Non-formal education which any country that gives priority to its use stands to gain. ICT use for facilitating and enhancing instruction and learning of other subjects and ESL reading in particular was also reviewed. Literature also revealed the state of ICT use in Adult Literacy Education in Africa and that of Nigeria is still very low compare to that of the developed world. Although, there have been studies on the use of ICT devices and tools in ESL learning in Nigeria, much of these studies as revealed by literature were carried out among students in the formal school system. However, there is dearth of studies in the area of ICT use in Adult Literacy Education Programmes particularly in Adult Language Learning Programme.

2.2 Empirical Studies

Empirical studies have highlighted connection between ICT and ESL, attitude and demographic factors and ICT and learners performance.

2.2.1 ICT and English Language

The impact of ICTs on learners' vocabulary development is a current in literacy education and the successful employment of ICT in education process is measured in terms of learning outcomes, learners' motivation, learners' engagement and integrating appropriate strategies. Many ICT researchers have advocated inclusion of ICT tools in education because of the claim that it can improve learning and facilitate teaching and learning of English vocabulary (Olszak, 2015).

In a study by Tunde-Awe (2015) on ICT use in teaching ESL in Nigeria universities shows that respondents perceived that ICT can be used for English language– 69% and 71 % of them agreed that ICT could be employed to practice reading and writing skills respectively. A total of 65% agreed that ICT could serve as an effective tool for enhancing learners' English communication skills. The study further showed that respondents agreed that ICT enhanced their confidence to read and write in English 71.5% and 62% respectively. A total of 69.5% agreed that their participation in face book online environment enhanced their confidence to communicate in English. Similarly, a study by

Olszak (2015) on the effect of ICT tools (online) on reading habits among teenage learners showed that majority of examined learners make use of ICT while reading books/materials and 80% of the learners refer to ICT devices when reading. This shows that learners are familiar with current ICT tools and find them useful. The result further indicated that the favourite and most beneficial are various kinds of online dictionaries, namely Polish-English dictionary (78%), English-Polish dictionary (75%) and other foreign online dictionaries (75%). A study on ICT use for enhancing reading among first year learners of English language in Hassiba Ben- Bouali University of Chief in Algeria by Benettayeba (2012) showed that most respondents, representing 67%, agreed that using ICT in reading classroom is very interesting, six students (25%) concurred, while two (8%) had no idea.

Findings from a study by Ally, McGreal, Schafer, Tin, & Cheung, (2007) on the use of mobile learning technology to train ESL adults indicated that there was an improvement on learners achievement score after the learners have accessed and studied the grammar units on the mobile phone with the average score on the pre-test 15/20 and the average score on the post-test 17.7/20. Also, there was further improvement on the retention test which was administered one week after the post-test. The retention test which was administered to the students one week later showed the average score of 18/20. An experimental study on the effective use of talking book as ICT-based instructional tool in the teaching of reading in adult literacy programme by Adelore (2007) showed an impressive growth in letter sound identification of learner. The use of ICT also encouraged collaborative learning of reading task especially outside the classroom among learner. Also independent learning was fostered whereby learners were able to learn at their own pace and their own convenience.

2.2.2 Attitude and Demographic Factors

Research findings from a study on how ICT influence students study habits by Mbah (2010) revealed that more than ¾ of the students (81%) exhibited a positive attitude towards ICTs, although, male students (90%) showed more positive attitude than female students (73%). The *statistical* analyses unveiled that no significant difference exists between attitudes of males from rural and urban areas towards the use of ICT in instructional delivery. This means that there is no difference in attitudes of males and females from urban and rural areas towards learning to use ICT (Sarfo, Amartei, Adentwi & Brefo, 2011). A study by Ayebi-Athur (2010) on the relationship between the attitudes of undergraduate and

postgraduate students toward computers and their achievement showed a positive outcome. The general achievement of the undergraduate students was good with the standard deviation 15.6. Similarly, the achievement of the postgraduate students was good with the standard deviation 10.1.This implies that both set of students showed positive attitudes toward ICT. Majority of the postgraduate students exhibited positive attitudes with the mean score 3.0 or higher towards computer use and also enjoyed using computer with the mean =93.2. Also, the scores of most of the undergraduate students indicated positive attitudes with the mean score of 3.0 or higher and enjoyed the use of computer with mean = 3.3. However, two items in the undergraduate students' scores indicated negative attitude with the mean = 1.9 and 1.7.

A study on students attitude towards ICT use among university students in Czech, revealed that male students achieved an average score of 3.63(SD = 0.05), with the average score of 3.55 (SD = 0.04) for females students. The implication of this is that males show more positive attitudes towards ICT than females. This supports the body of knowledge that "males are technically more competent in ICT use than females" (Kubiatko, 2010).

On gender lines, in a study investigated by Kwapong (2009) the findings indicated that 80.6% of the men in northern Ghana as against 91.6% of the men in Greater Accra region acknowledged prior awareness of ICT, whereas 60% of women in the three regions and 88.9% of women in Greater Accra region had prior knowledge of ICT. The chi-square results showed sex and knowledge of ICT are significantly connected ($x2$ = 14, df=1, p=0.00). This showed that most of the respondents who answered "Yes" to knowledge of ICT were males; while most respondents who answered "No" were females implying that males are more knowledgeable about ICT than females.

The result of a study by Dhanavandan, Esmail and Mani, (2008) on the use of ICT by librarian revealed that all the participants are used to ICT devices of one kind or the other most especially the internet and mobile phones. ICT use among female participants is rather higher than among male participants. The result also showered significant connection between ICT usage and gender or between age and the use of ICT, however with some disparity. Participants strongly agreed that ICT tools played an important role in supporting and enhancing their professional and research activities. Their remarks suggest that they

know ICT use is more the use of the internet to search for resources and the use of e-mail to stay in touch with friends, colleagues, and others.

2.2.3 ICT and Learners Academic Achievement

The concept of ICTs is broadly used in education thereby giving it a myth-like nature. Consequently, it is important to clarify its function and usage as tutoring and learning aid and underscore its impact on learners' academic achievement. ICTs increases access to education, reinforce its importance its quality. The accepted benefits of ICTs as technological aid to education have been demonstrated through its integration into classroom and other educational settings worldwide. The connection between usage of ICT and learners' academic achievement received much research attention in the last two decades (ul-Amin, n.d). A study conducted by Arinze, Okwokwo and Iwunor (2012) which investigated whether ICT is available in schools, whether junior secondary school students have skills in it and whether ICT application in social studies has impact on the 'academic achievement of students revealed that ICT aroused interest and improved the achievement of students in social studies. Thus, ICT should be built-in in social studies curriculum. Van der Westhuizen, Nel, and Richter (2012), in their study on the effects of the integration of ICT on the academic achievement of full-time geography student teachers enrolled for a Bachelor of Education (B. Ed.) degree at a rural university in a developing country indicated that the learner-centred ICT method was well received and applied by students and that it did not endanger their academic achievement. Similarly, an investigation in the impact of ICTs on students' achievement by Mbaeze, Ukwandu and Anudu (2010) with a total of 120 participants showed no significant connection existed between ICTs and learners' academic achievement with $X_2=2.06$; critical F value of 3.84 with 0.05 level of significance. Findings from another study conducted by Singh (2013) revealed that significant difference exist between ICT usage and academic achievement of male and female distance learners and female distance learners tend to use ICT more in comparison to male learners.

2.3 Theoretical Framework

2.3.1 Constructivism Theory

A learning theory that supports ICT usage in adult literacy education is Constructivism. Constructivism as a theory of cognitive growth identifies learning as an

active process through which an individual generates new ideas or concepts while transforming existing one. According to the theory, meaning is generated from one's experiences and a cognitive structure derived from those experiences. In this case, a learner creates knowledge through active connection and assimilation of new information or insight into existing knowledge structure. This new knowledge or ideas become useful and is incorporated as the learner sees connections among existing concepts, knowledge and the new ideas. From these the learner chooses and interprets information, constructs hypotheses, and then makes decisions by relying on a cognitive structure of schema, or mental models.

Constructivism is traced to the eighteenth century and the German philosopher Immanuel Kant, and then more recently to research conducted by the Swiss psychologist, Jean Piaget (1973) and theorists (and adherents) such as Bruner (1986, 1990), Papert (1993), Resnick (1989), and Rosen (1999). This learning theory when applied to classroom situation is described as project-based, student-centered, participatory, engaged, cooperative, or inquiry learning. It starts with a question, problem, topic, or product of high interest to students. The subject decided on is then organized into a project with specific goals and products through which basic skills can be acquired. ICT plays many important roles in constructivist learning: students use CD-ROM encyclopedias, dictionaries, and other research tools, as well as the Internet and mobile phones, to search for answers to their questions; they use computers to do word processing and publish the results of their projects; and they use presentation software to show their projects in class and in the community (Rosen, 1999). With this learning approach, learning is individualized around the specific tasks and issues that motivate learners' work. However, the primary responsibility for structuring and guiding learners work remains that of the teacher and ICT is often used as a way of sharing learners work to obtain feedback from others.(Kozman and Wagner,2005).

Conceptual Model for the Study

```
                    ┌─────────────────────────┐
                    │      Treatment:         │
                    │   Talking Book          │
                    │   Mobile Phone          │
                    │   Conventional mode     │
                    └─────────────────────────┘
             ↙                  ↓                  ↘
┌──────────────────┐                      ┌──────────────────┐
│  Gender          │                      │  Age             │
│  Male            │ ←──────────────────→ │  Young People    │
│                  │                      │  Adults          │
└──────────────────┘                      └──────────────────┘
             ↘                  ↓                  ↙
                    ┌─────────────────────────┐
                    │   Learning outcomes:    │
                    │    Academic Achievement │
                    │   ICT skills            │
                    │   Attitude to ICT use   │
                    └─────────────────────────┘
```
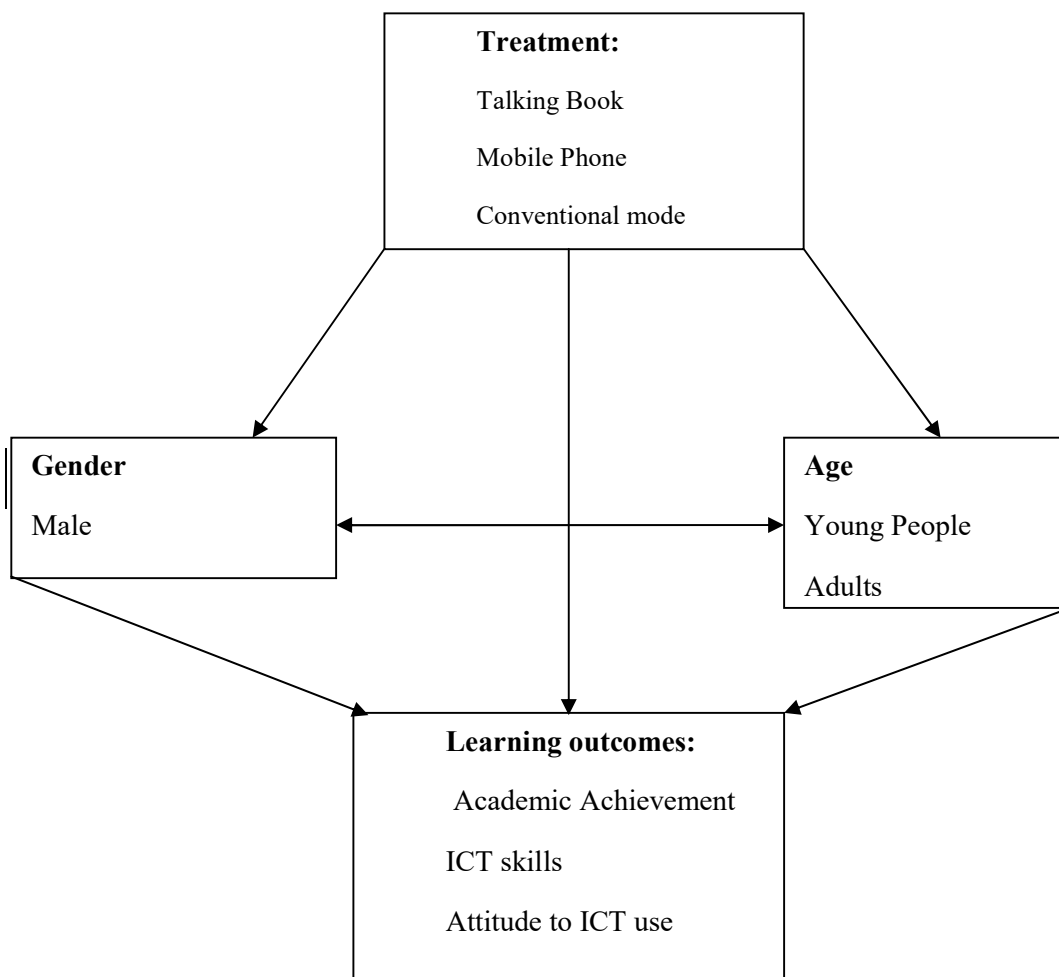
With the application of constructivism theory in this study, it is believed that learners would be encouraged to actively construct new ideas/experience through the use of ICT. Learners would be engaged in this study through the use of Talking books and Mobile phones in English vocabulary learning which would help in developing their capability to construct new knowledge. It would help learners to apply their own experience and new knowledge constructed to explore their environment. This theory lends credence to one of the characteristics of adult learners which is self-directed learning. The application of this theory to classroom situation is described as problem-solving, learners would have the opportunities to solve problems on their own using Talking books and Mobile phones thereby improving their higher-order thinking ability. It will help the facilitator to get correct evaluation of learners because they will be assessed based on their ability to demonstrate through actual performance.

CHAPTER THREE

METHODOLOGY

This chapter deals with the research methodology which includes design, variables of the study, selection of participants, research instruments, validation and reliability of instruments, research procedure and data analysis.

3.1 Research Design

The pretest-posttest and control group quasi experimental design was adopted. The research design is represented schematically as follows:

Experimental group I $\quad\quad\quad O_1\ x_1\ O_2$

Experimental group II $\quad\quad\quad O_3\ x_2\ O_4$

Control group $\quad\quad\quad\quad\quad O_5\ x_3\ O_6$

O_1, O_3 and O_5 = pre-test for experimental I, experimental II and control groups respectively

O_2, O_4 and O_6 = post-test for experimental I, experimental II and control groups respectively

x_1 = treatment I (talking book based instructional tool group)

x_2 = treatment II (mobile phone based instructional group)

x_3 = control group (conventional teaching method)

In all, the independent and moderator variables were crossed as shown below in 3 x 2 x 2 factorial matrix

Table 3.1.1

Groups (A)	Male B^1		Female B^2	
	Young Adult C^1	Old Adult C^2	Young Adult C^1	Old Adult C^2
Talking Book A^1	$A^1 + B^1 + C^1$	$A^1 + B^1 + C^2$	$A^1 + B^2 + C^1$	$A^1 + B^2 + C^2$
Mobile Phone A^2	$A^2 + B^2 + C^1$	$A^2 + B1 + C^2$	$A^2 + B^2 + C^1$	$A^2 + B^2 + C^2$
Control A^3	$A^3 + B^1 + C^1$	$A^3 + B^1 + C^2$	$A^3 + B^2 + C^1$	$A^3 + B^2 + C^2$
Total				

3.2   Variables in the Study

The following variables are covered in the study:

3.2.1   Independent Variable

There is only one independent variable in this study (mode of instruction) that is manipulated at three levels:

Talking-book based instructional group

Mobile-phone based instructional group

Conventional method group

3.2.2   Moderator variables

There are two moderator variables:

Gender (male and female)

Age   (young and old adult)

3.2.3   Dependent Variables

There are three dependent variables:

Academic Achievement in English vocabulary

ICT skill

Attitude to ICT use

3.3   Selection of Participants

A sample of sixty (60) adults was involved in this study. A random sampling technique was used to select three (3) literacy centers from the literacy centers in Oyo state and a purposive sampling technique was adopted in selecting twenty (20) participants from each literacy centers and also in selecting the literacy centers that constituted the groups that were used for experimental group I, II and control group.

Criteria for inclusion

Adult learners in intermediate class

They should be able to read simple text

They should be willing to participate without coercion

Learners should bring their own devices (BYOD for participants in mobile group).

3.4 Research Instruments

Twelve research instruments were developed and used for the collection of data. They are described as follows:

3.4.1 Questionnaire on Learners' Attitude to ICT-Based Learning (QLAITIBL)

This questionnaire was designed to collect data on the attitude of learners towards ICT use in learning of vocabulary in English language. Attitude scale for ICT with 4 Likert-type items by Ally, McGreal, Schafer, Tin & Cheung, B. (2007), Ayebi-Arthur (2010), & Rhema & Miliszewska (2014) was modified for use in this study.

This instrument had four sections. Section A, demographic information on the participants, including age, gender, marital status, occupation, educational background, local government area. Section B consisted 10 items to determine adult learners' use of ICT in literacy reading programme. It required the respondents to respond to each item using 'YES' or 'NO'. Section C consisted 20 items each, which elicited information from participants on their experience on using talking books and mobile phones respectively, in learning English vocabulary. Section D consisted 20 items designed to determine the attitude of learners towards ICT-based learning. The respondents responded to each item using 4-point Likert scale of 'Strongly Agree', 'Agree', 'Disagree' and 'Strongly Disagree'. This instrument was given to the learners after the treatment to determine the effect of treatment on learners' attitude to the ICT-based learning. A reliability coefficient index of 0.86 was obtained.

3.4.2 English Vocabulary Achievement Test (EVAT)

This instrument was designed to test learners' performance in English vocabulary. It consisted twenty (25) items of multiple choice types (MCQ), drawn from the twelve (12) lessons for the six weeks duration of intervention of the study. This was used for both pre-tests and post-tests. This was developed by the researcher to ascertain the entry level and outcome of intervention in this study. The questions contained one correct answer and three other distracter which were drawn from the concepts of vocabulary. A reliability coefficient index of 0.94 was obtained. (Details in appendix 3).

3.4.3 In-Depth Interview (IDI)

The qualitative method of in-depth interview was used to supplement the questionnaire. This was used to elicit information from the facilitators involved on their perceived impact of the intervention on participants. The interview was carried out with the help of a guide developed by the researcher. The guide consisted questions related to the objectives of the study.

There was a session of IDI in each of the literacy centers selected for the study. The session was recorded using a tape recorder after permission was sought from the respondents. This was later transcribed by the researcher and used as part of the data generated for this study (Details in Appendix IX)

3.4.4 Talking Book-Based Instructional Tool Package (TBBITP)

This instrument was a set of instructional package designed for mobile learning, based on electronic device capabilities. The mobile device was powered by android with features like short message service (SMS), call, calendar, dictionary, camera, audio recording, video recording, multimedia message service, SD card slot, Bluetooth, instant messaging service, internet, email services and social media applications but different from a mobile phone in terms of visibility size (bigger than mobile phone), resolution (information on it is usually bigger than how it would appear on the mobile phone), memory size and operating system. This device embodied the instructional contents with embedded speech on an electronic device in a lesson format and evaluation package assigned to each week's lesson to provide feedback for facilitators. The instructional content overview contains twelve (12) lessons for six (6) weeks, two lessons were taught in a week. The content was locally derived from topics ranging from Health, Security, Parenting, Voting Rights, Drug Abuse and Farming among others within the Nigerian context based on the curriculum in use, to teach reading with focus on vocabulary acquisition and instruction. The content was e-scaffolded with the use of speech component, graphic illustrations and in-built glossary.

The graphic illustrations helped in providing context cues that fostered better understanding of the content while the in-built glossary provided the meaning of the highlighted words within the text. The content was also interactive in nature whereby input

was made and output got through the use of in-built keyboard. The evaluation instruments included activities, tasks and assignment from the passages read within the text. It required that learners possess the knowledge on how to operate this device so as to access the instructional content. This instrument was specifically for learners in Experimental Group 1. The learners in this group were provided with these electronic devices containing the instructional content developed by the researcher. The learning resource was designed by the researcher while the learning technology was done by a professional technical expert in deploying content on the electronic device. A reliability coefficient index of 0.86 was obtained.

3.4.5 Mobile Phone –Based Instructional Tool Package (MPBITP)

This researcher personally developed the instrument. It was a set of instructional package designed for mobile learning, based on mobile device capabilities. The mobile device was powered by android with features like short message service (SMS), call, calendar, dictionary, camera, audio recording, video recording, multimedia message service, SD card slot, Bluetooth, instant messaging service, internet, email services and social media applications. This embodied the instructional content in a lesson format and evaluation package assigned to each week's lesson which provided feedback to facilitators. The instructional content overview contained twelve (12) lessons for six (6) weeks, two lessons were taught in a week. The content was locally derived from topics ranging from Health, Security, Parenting, Voting Rights, Drug Abuse and Farming among others within the Nigerian context based on the curriculum in use, to teach reading with focus on vocabulary acquisition and instruction. The content was e-scaffolded with the use of graphic illustrations and in-built glossary.

The graphic illustrations helped in providing context cue that fostered better understanding of the content while the in-built glossary provided the meaning of the highlighted words within the text. The content was also interactive in nature whereby input was made and output got through the use of keypads. The evaluation instruments included activities, tasks and take home assignments from the passages read. It was required that learners have basic knowledge on how to operate their mobile phones in order to access the instructional content and be able to send feedback at the end of each week's lesson. This

instrument was specifically designed for learners in Experimental Group 2. Learners in this group were expected to have internet enabled phones and where they don't have the researcher provided them with mobile phones for the purpose of this study. A reliability coefficient index of 0.86 was obtained.

3.4.6 Conventional Method –Based Package

This researcher personally developed the instrument. It was a set of instructional package designed for conventional method of teaching. It embodied the instructional content in a lesson format and evaluation package assigned to each week's lesson provided feedback to facilitators. The instructional content overview contained twelve (12) lessons for six (6) weeks, two lessons were taught in a week. The content was locally derived from topics ranging from Health, Security, Parenting, Voting Rights, Drug Abuse and Farming among others within the Nigerian context based on the curriculum in use, to teach reading with focus on vocabulary acquisition and instruction. The content was also scaffolded with the use of graphic illustrations but with support and instructions from the facilitator. The evaluation instruments included activities, tasks and take home assignments on the passages read.

3.4.7 Instructional Guide on Talking Book-Based Instructional Tool (IGTBBIT)

This researcher designed the instrument to guide the facilitators in the Experimental Group 1. It provided step by step guide on how participants could use the talking book-based instructional tool. It consisted information on how the participants could use the electronic device on which the instructional content for this study was deployed in order to access it (Details in Appendix 6). This was to ensure uniformity in the research process. This instrument was made up of the following steps:

- Press the power button
- Look for the menu button
- Tap on the menu button
- Look Articulate icon
- Tap on the Articulate icon
- Look for the Talking book-based ESL instructional content

- Tap on the Talking book-based instructional content to open it

- Tap on the *resume* to access the instructional content

- Tap on the *instruction* to read the instruction

- Tap to select from the menu the module to be studied in other to access the content as the case may be.

- Interact with the module by tapping either on the lower edge on the right hand side to move to the next page or the lower edge on the left hand side *s* to go back to the previous page.

- Tap on the sound icon to listen to the speech component of the talking book.

- Tap on the highlighted words to listen to the meaning and pronunciation of the words as provided by the speech component.

- Tap on the sound icon again to disable the speech components in case it is not needed.

- Tap on the glossary to view the meaning of the highlighted words used in the module under study.

- Attempt the tasks provided at the end of the lesson.

- Go back to the menu page to select the next module and do the same to the module as above.

3.4.8   Instructional Guide on Mobile phone-Based Instructional Tool (IGMPBIT)

This researcher designed the instrument to guide the facilitators in the Experimental Group 2. It provided step by step guide on how participants could use the mobile phone-based instructional tool. It consisted information on how the participants could navigate on their mobile devices on which the instructional content for this study was deployed in order to access it (Details in Appendix 5). This was to ensure uniformity in the research process. This instrument was made up of the following steps:

- Press the power button

- Look for the menu button

- Tap on the menu button

- Look for the Articulate icon

- Tap on the Articulate icon

- Look for the Mobile phone-based ESL instructional content
- Tap on the Mobile phone-based instructional content to open it
- Tap on the *resume* to access the instructional content
- Tap on the *instruction* to read the instruction
- Tap to select from the menu the module to be studied in other to access the module as the case may be.
- Interact with the module by tapping either on the *next* to move to the next page or *previous* to go back to the previous page.
- Tap on the highlighted words to give you the meaning of the words in print form.
- Attempt the tasks provided at the end of the lesson.
- Tap on the glossary to view the meaning of the highlighted words used in the module under study.
- Go back to the menu page to select the next module and do the same to the module as above.

3.4.9 Instructional Guide on Conventional Method (IGCM)

This instrument was designed by the researcher to guide the facilitators in the control group. The facilitators in this group used the conventional approach in the teaching of English vocabulary following the instructional guide on conventional method provided by the researcher in order to follow the instructional content found in the treatment guide to ensure uniformity (Details in Appendix 7). The steps in this instrument are made up of the followings:

- Facilitator introduces the lesson
- Facilitator reads the passage along with learners
- Discuss the passage read
- Facilitator writes new words on the passage
- Facilitator gives the meaning of those words through the use of dictionary, content clues, semantic analysis or graphic organiser
- Facilitator use those words in sentences
- Facilitators asks the learners to use those words in new sentences
- Learners answers the questions on the passage

3.4.10 ICT-Based Learning Lesson Plan (IBLLP) Template

This instrument showed a blue print of what was taught using talking book, mobile phone and conventional mode. It was designed in such a way that detailed information on the lesson was provided for and also provided sequence of activities that was carried out by the learners after interacting with the content. This template was designed in a module form with each module containing two units of lessons. Other aspects of the IBLLP include: introduction, objectives, instructional content, and illustrations, learning points, activities, tasks and glossary. (Details in appendix 4)

3.4.11 Observational ICT Skill Rating Sheet (OISRS)

This instrument was designed to assess the extent to which adult participants have the skills to use the ICT devices on which the instructional content for the study was deployed and it was used as to determine the keyboarding and navigating skills of the participants. The participants were observed by the research assistants while demonstrating their skills. The worksheet had set of skills that were placed along the scale of competent, moderately competent and not competent. A reliability coefficient index of 0.78 was obtained (Details in Appendix 8).

3.4.12 ICT-Based Instructional Package (IBIP)

This researcher personally developed the instrument. It was a set of instructional package designed for Talking book, mobile phone and control group. This package was designed and developed using ADDIE Model and ICT-Based Learning Lesson Plan Template. It embodied content that was locally sourced from topics ranging from Health, Security, Parenting, Voting Rights, Drug Abuse and Farming among others within the Nigerian context based on the curriculum in use, with focus on vocabulary acquisition and instruction (Details in Appendix 1).

3.4.13 Cloze Test for Readability of the Instructional Content Package (CTTRICP)

Readability test is to measure the ease with which a learner can read through a written text. The instrument was used to measure the ease at which adult learners could read through the content of the instructional tool package. To establish the readability of the

instructional content of the package, Bormuth (1975) readability formular was used and the instrument was administered on fifteen (15) adult learners who were not part of the main study (Details in appendix XII). The reading level of learners using Bormuth criteria for scoring cloze test is as follows:

54-100 Independent level: This implies that the text is too easy to read for the reader

39-53 Instructional level: This indicates that the reader can read through text with the assistance of an instructor.

0-38 Frustration Level: this shows that the text is too difficult for the reader.

Bormuth Readability Test Formular

To test for the readability of the content of the instructional package, the reading levels of adult learners were analysed and the learners' score show that:

20% (3) of the learners fall within the independent level

60% (9) of the learners fall within the instructional level

20% (3) of the learners fall within the frustration level

The result of the analyses shows that the text is neither too easy nor difficult for the learners to read.

3.5 Validation of Instruments

To ascertain the content, face and the construct validity of the instruments, copies were made available to the researcher's supervisor and other experts in the field of English language, Educational Technology and Literacy Training Development at the University of Ibadan for evaluation and assessment towards improvement. Their suggestions were carefully considered and were included in the instruments. These instruments (EVAT, OISRS, CTTRIP, TBBITP, MPBITP, CMBC and QLAITIBL) were later taken to adult literacy center at Emmanuel College at Samonda and were administered on 15 sample subjects (adult learners in intermediate class) that were not part of the sample for the study. The validation process lasted for a period of three (3) weeks which helped in gathering the data that were statistically analysed to ascertain the reliability of the instruments using Cronbach alpha, Kuder- Ricardson (K-R, 20) and Bormuth Readability test formular.

The first week involved the administration of EVAT, OISRS, CTTRIP and the training of both the facilitators and learners on how to use the instructional packages. The remaining two weeks were used to expose the learners to two modules of the instructional package after which QLAITIBL was administered on the participants to elicit responses from them on their attitude to the use of ICT to acquire vocabulary.

The three weeks of validation process availed the researcher the opportunity to see the feasibility and the effectiveness of these instruments. It also helped the researcher to have a clear understanding of likely areas where there might be challenges in the course of the main study if these instruments have not been trial tested. As a result of this, the followings were observed and were modified for use in the main study: the font size of text on the ICT devices have been increased, buttons not functioning have been enabled, re-arrangements of some illustrations to depict the message of the passage and the navigation on the interfaces of the instructional package was improved upon to be more learners friendly. Feedbacks were also gotten from the participants who showed their willingness to use ICT in learning, that ICT should be integrated into adult literacy programme and that these instructional package should be made available to learners.

3.6   Research Procedure

Procedure for this study involved two stages with their activities. These stages are as follows:

Stage 1:

This stage involved the designing and developing English as second language instructional package using ADDIE Model. This model is a dynamic, flexible guide line for building effective instructional package. It involves five phases which are: analysis, design, development, implementation and evaluation.

Elements in the model	Implications in the package
Analysis phase • Audience and characteristics • Learning constraints • Delivery option • Andragogical consideration • Time line for the project • Behavioural objectives	• Intermediate adult learners identified • Insufficient English vocabulary knowledge; poor production and use of English language • ICT-based instructional tools (talking book and mobile phones) • Experiential and self-directed learning • To improve learners vocabulary knowledge and enhance the teaching and learning of English vocabulary among adult learners • Ten weeks
Design phase • Documentation of the instructional design • Design the user interface • Apply graphic design	• Content divided into modules was drawn from societal issues such as drug abuse, parenting, farming, voting rights among others. and stories wrapped around them with frequently used words highlighted for vocabulary learning • Design of the illustrations that will accompany each paragraphs on the content was done • Interface of the package was designed using linear format • Learner' activities and feedback was designed • ICT-based lesson plan template was designed • Test items were developed
Development phase • Work with the procedure (template) to create and assemble the content and integrate technology	• First and second prototype of the instructional package was produced to be trial tested • Uploaded to Temple Share on Articulate App as off line mode and downloaded on ICT devices with 4.2 android operating system
Implementation phase • Procedure for training facilitators and learners • Training on the new tools • Trying out the prototype	• A guide on the step by step procedure on how to use the content and the ICT tools for both the facilitators and learners were provided • The second prototype was trial tested
Evaluation phase • formative • summative	• Pre and post test on English vocabulary achievement, ICT skill and attitude to ICT use, in depth interview, learner's class activities and feedbacks.

Stage 2

Phase 1: This phase involved the training of the research assistants on how to use the instructional guide on both the talking book and mobile phone package to navigate the interfaces on the ICT-based instructional tools in experimental group I & II. They were trained on how to monitor and guide the facilitators during the delivery stage.

Phase 2: At this stage, the researcher visited the randomly selected adult literacy centers to intimate the facilitators and the participants on the objectives of the study. The nature and purpose as well as the duration of the study was explained to the participants, facilitators and the coordinators in charge of the literacy centers. Also at this stage the adult literacy centers selected for this study were grouped into experimental 1, experimental 2 and control group.

Phase 3: This phase consisted of three steps and lasted for the period of ten (10) weeks. They were as follows:

Stage 1: This stage involved the training of the facilitators and the participants selected for this study on how to use the ICT tools. They were trained on how to navigate the interfaces on the ICT-based instructional tools in experimental group I & II after which the pre-test was administered. The administration of pre-test was to test the entry level of the participants before the intervention was carried out at this stage. The researcher was assisted by research assistants who administered the pre-test instruments in the following order: Observational ICT Skill Rating Sheet (OISRS) and English Vocabulary Achievement Test (EVAT), Questionnaire on Learners' Attitude to ICT-Based Learning (QLAITIBL). This stage lasted for a period of two weeks.

Stage 2: This stage was the intervention stage. This stage lasted for a period of six (6) weeks. Week three through to eight scheduled for the study was the phase when the investigating exercise was carried out, that is, the treatment applied on the participants and the questionnaire administered. The participants in both experimental and control groups were exposed to the same content on ESL reading with the focus on vocabulary acquisition. Week 9, was for the revision of the lessons taught from week 3-8.

Stage 3: This stage was for the administration of the post-test (EVAT, QLAITIBL and OISRS) on participants in both experimental and control groups, evaluation of items on the

research instruments, session for in-depth interview with the facilitators, appraisal of the study and appreciation of all the participants. This stage lasted a period of one week.

Table 3.7.2: Field Work Activities

S/N	WEEKS	ACTIVITIES	TOPICS
1	1st & 2nd wk	General training of facilitators and participants on the ICT tools, application and how to navigate the interfaces on the ICT-based instructional tools in experimental group I & II Pre-test for experimental and control group	-
2	3rd -8th wk	Teachings on vocabulary instruction from comprehension passages in experimental and control groups	Drug Abuse Safety and Security Healthy Living Parenting Voting Rights Farming
9	9th	Revision of lesson taught from week 3-8	-
10	10th	Administration of post-test In-depth interview for facilitators Appreciation of participants	-

3.7   Method of Data Analysis

The demographic information collected on participants was analysed using descriptive statistics of frequency counts and percentage. Analysis of covariance (ANCOVA) was used to determine the main and the interaction effects with the pre-test being used as the covariates. The Estimated Marginal Means (EMM) was employed to determine the magnitude of performances across the groups. The Bonferronni post-hoc analysis was used to determine the sources of variation and direction of significant differences among the groups. The hypotheses were tested at 0.05 alpha level of significance. The qualitative data collected through the IDI was analysed using thematic analysis.

Table 3.7.3 Method of Data Analysis

Descriptive statistics	Frequency counts Percentages Mean score Standard deviation	Research Questions One to Four
Inferential statistics	Analysis of Covariance (ANCOVA) Estimated Marginal Mean (EMM) Bonferroni Post hoc	Hypotheses One to Seven
Thematic Analysis	In depth Interview	Research Question Five

CHAPTER FOUR

RESULTS AND DISCUSSION OF FINDINGS

4.1   Data Analysis

The data obtained were analysed, presented and discussed based on the order of research questions and hypotheses raised.

4.2   Answers to Research Questions

Research Question 1: What are the ICT tools used for instructional delivery in adult literacy programme in Oyo state?

To answer this question, data collected using questionnaire was analysed with descriptive statistics of frequency count and percentage. Table 4.1 presents the Analysis.

Table 4.1. ICT tools used for Instructional Delivery in Adult Literacy Progtamme before Intervention

| | | Responses | | | | | |
| | | Yes | | No | | Total | |
Types of Technology	N	%	N	%	N	%
Desktop computer	-	-	60	100	60	100
Laptops	-	-	60	100	60	100
Ipads		-	60	100	60	100
Mobile phones	-	-	60	100	60	100
Talking books			60	100	60	100
Radio			60	100	60	100
Television			60	100	60	100
Disc Mp^{3}player			60	100	60	100
Video			60	100	60	100
Projectors			60	100	60	100

Table 4.1 presents the responses of the participants to the ICT tools listed whether they are used for instructional delivery in ESL programme. The participants' responses revealed that none of these ICT tools is employed as tools for instructional delivery in adult literacy programme programme in Oyo state.

Research Question 2: What is the post treatment experience of adult learners on the use of talking books and mobile phones as instructional tools for learning English vocabulary?

To answer this question, data collected using questionnaire was analysed with descriptive statistics of mean deviation.
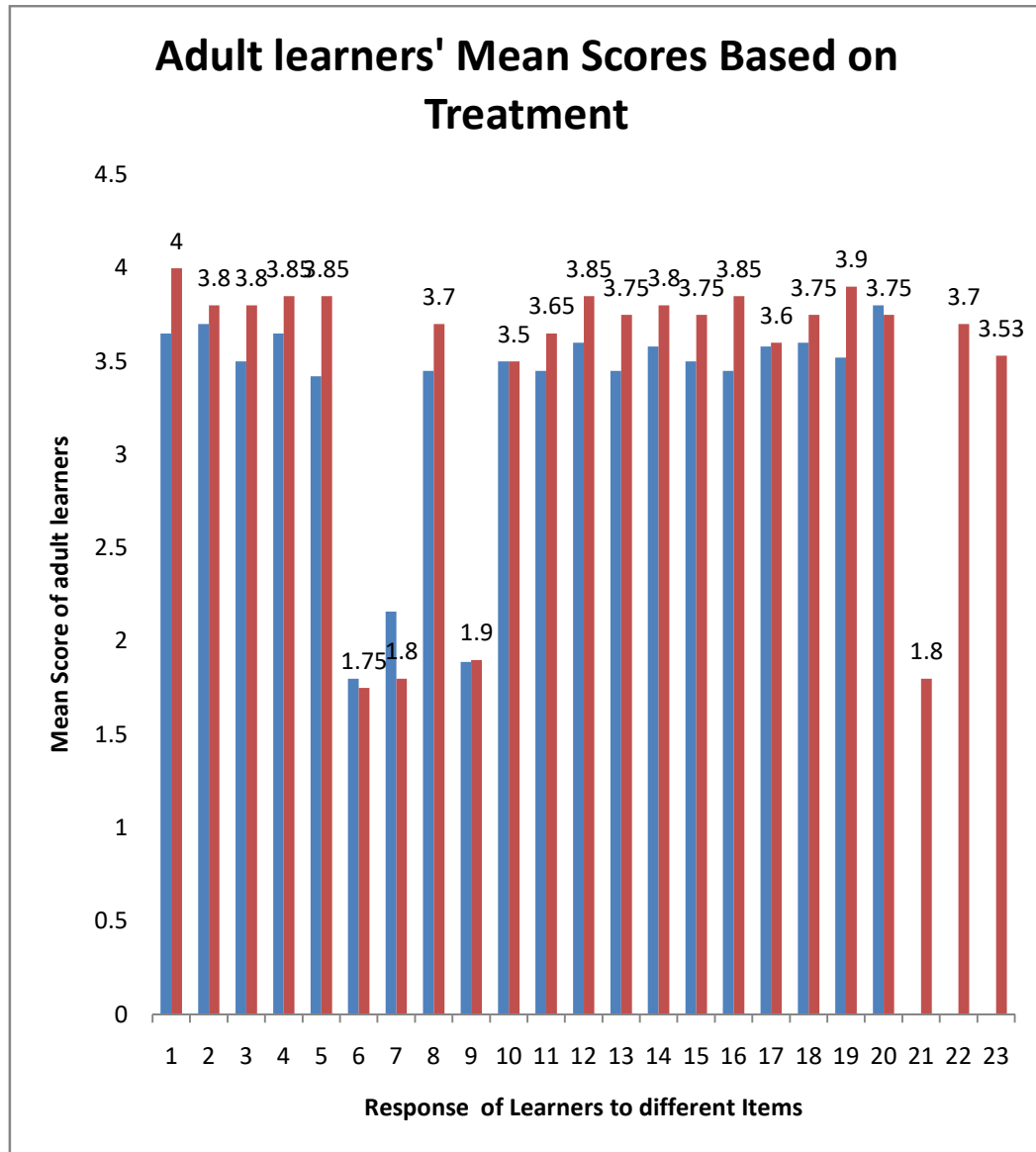
Figure 4.1. Bar chart showing adult learners' mean score based on treatment

Figure 4.1 indicates that only items 6 (1.8; 1.75), 7(2.16; 1.8) and 9(1.8; 1.9) were those items learners rejected as their mean scores fell below the bench mark 2.5 while other items were accepted. In addition, it showed that adult learners in talking book had higher mean score than those in mobile phone group. This implies that learners who used Talking book for vocabulary learning found it more interesting to use with the grand mean of 3.42 compared with their counterparts that used mobile phones with the grand mean 3.31 against the bench mark of 2.5. This implied that learners were able to relate well with the content and navigation of the interfaces on the ICT-based instructional package deployed on the ICT tools was easy. It also revealed that learners had no difficulty using the ICT tools for learning English vocabulary.

Research Question 3: What is the mean gain of adult learners according to treatment in academic achievement in English vocabulary, ICT skill and attitude to ICT use?
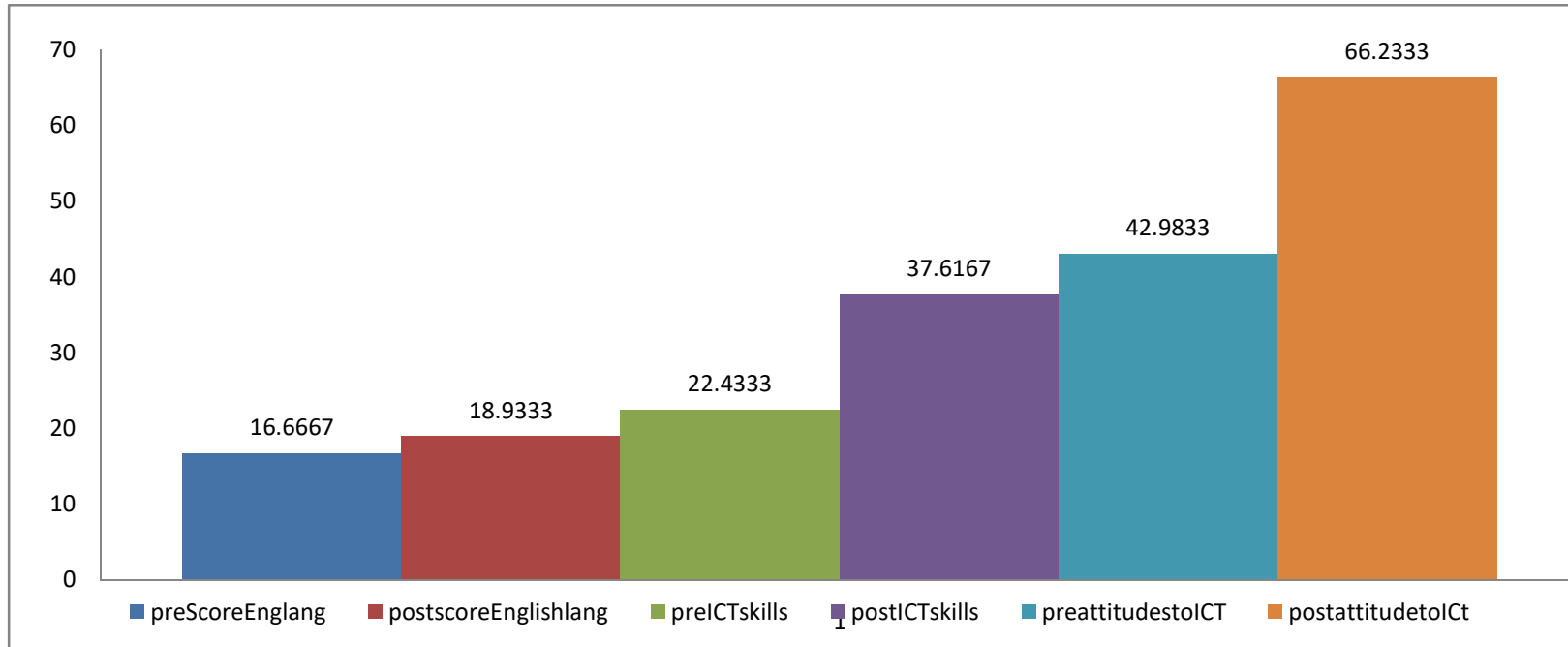
Figure 4.2: Histogram showing the pre and post test mean score of the dependent measures

Figure 4.2 presents the descriptive statistics of what happened before and after the treatment. Descriptively, it is observed that in overall there is a gain in the mean score of adult learners as a result of treatment in academic achievement in English vocabulary with 2.2666, ICT skill with 15.1834 and attitude to ICT use with 23.25.

Research Question 4: What is relevance of instructional package to learners need and experience in learning English vocabulary?

To answer this question, the data collected using in depth interview was analysed based on themes of responses gathered from the respondents.

The data collected using in-depth interview revealed that the ICT-based instructional package for English vocabulary learning was relevant to the need and experience of learners. In-depth interview was used to elicit information from facilitators on the relevance of the package to learners need and experience in learning English vocabulary. Facilitators reiterated that the package exposed learners to happenings around them in addition to giving more insights to such issues. They further explained that it was a very useful instrument in increasing adult learners' vocabulary knowledge which also helped in improving learners reading skill.

4.3   Test of Hypotheses

4.3.1   The Effects of Treatment on Academic Achievement of Adult Learners' in English   Vocabulary

Ho1a: There is no significant main effect of treatment on adult learners' academic achievement in English vocabulary

Table 4.2. **Summary of 3 x 2 x 2 Analysis of Covariance (ANCOVA) on Adult Learners'**
Academic Achievement

ANCOVA

Dependent variable: Post Achievement Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	422.800[a]	9	46.978	3.586	.002	.392
Intercept	586.099	1	586.099	44.745	.000	.472
preScoreEnglang	104.286	1	104.286	7.962	.007	.137
Treatment	155.557	2	77.778	5.938	.005	.192
Gender	2.569	1	2.569	.196	.660	.004
Age	14.185	1	14.185	1.083	.303	.021
Treatment * gender	7.793	1	7.793	.595	.444	.012
Treatment * age	27.933	2	13.967	1.066	.352	.041
gender * age	.058	1	.058	.004	.947	.000
Treatment * gender * age	.000	0	0.234	.001	0.994.	.000
Error	654.933	50	13.099			
Total	22586.000	60				
Corrected Total	1077.733	59				

R Squared = .392 (Adjusted R Squared = .283)

Findings from Table 4.2 pointed out that the treatment had a significant main effect on adult learners' achievement in English vocabulary ($F_{(2;50)}$=5.94 partial; η^2=0.19). Therefore, the null hypothesis Ho1a is rejected. This connotes that the treatment had a significant main effect on adult learners' achievement in English vocabulary with an effect size of 19.2%. In order to determine the direction of significance, Bonferroni post hoc analysis was computed for the pair wise comparison of the posttest achievement mean score of the treatment groups.

Table 4.3.   Estimated Marginal Means of English language Post-test Achievement according to treatment

Treatment	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Talking book	20.726	1.064	18.589	22.863
mobile phone	19.876	1.179	17.507	22.245
Control	14.760	1.351	12.047	17.473

From the given table above(4.3), the result shows that adult learners' exposed to talking book instructional tool had the highest posttest achievement mean score ($\bar{x}$ =20.726) followed by that of those exposed to the mobile phone instructional tool ($\bar{x}$ =19.876) and the least posttest mean score was obtained by those exposed to conventional method ($\bar{x}$ =14.760).

Table 4.4.   Bonferroni post hoc Analysis of Treatment Groups

Dependent Variable: Post test score of English vocabulary

(I) Treatment	(J) Treatment	Mean Difference (I-J)	Std. Error	Sig.[d]	95% Confidence Interval for Difference[d]	
					Lower Bound	Upper Bound
Talking book	mobile phone	.850	1.591	1.000	-3.092	4.792
	Control	5.966	1.721	.003	1.704	10.229
mobile phone	Talking book	-.850	1.591	1.000	-4.792	3.092
	Control	5.116	1.787	.018	.690	9.542
Control	Talking book	-5.966	1.721	.003	-10.229	-1.704
	mobile phone	-5.116	1.787	.018	-9.542	-.690

The results from the above table (4.4) accounts that the posttest achievement mean scores of adult learners' exposed to Talking book instructional tool is significantly different from that of those exposed to modified conventional method but not significantly different from that of those who got instruction through the mobile phone instructional tool. Similarly, the posttest achievement mean scores of learners exposed to conventional method are significantly different from that of those exposed to the mobile phone instructional tool. It can be deduced that the significant main effect of treatment reported in table 4.4 is due to the

posttest achievement mean scores of adult learners' exposed to the talking book and mobile phone instructional tools.
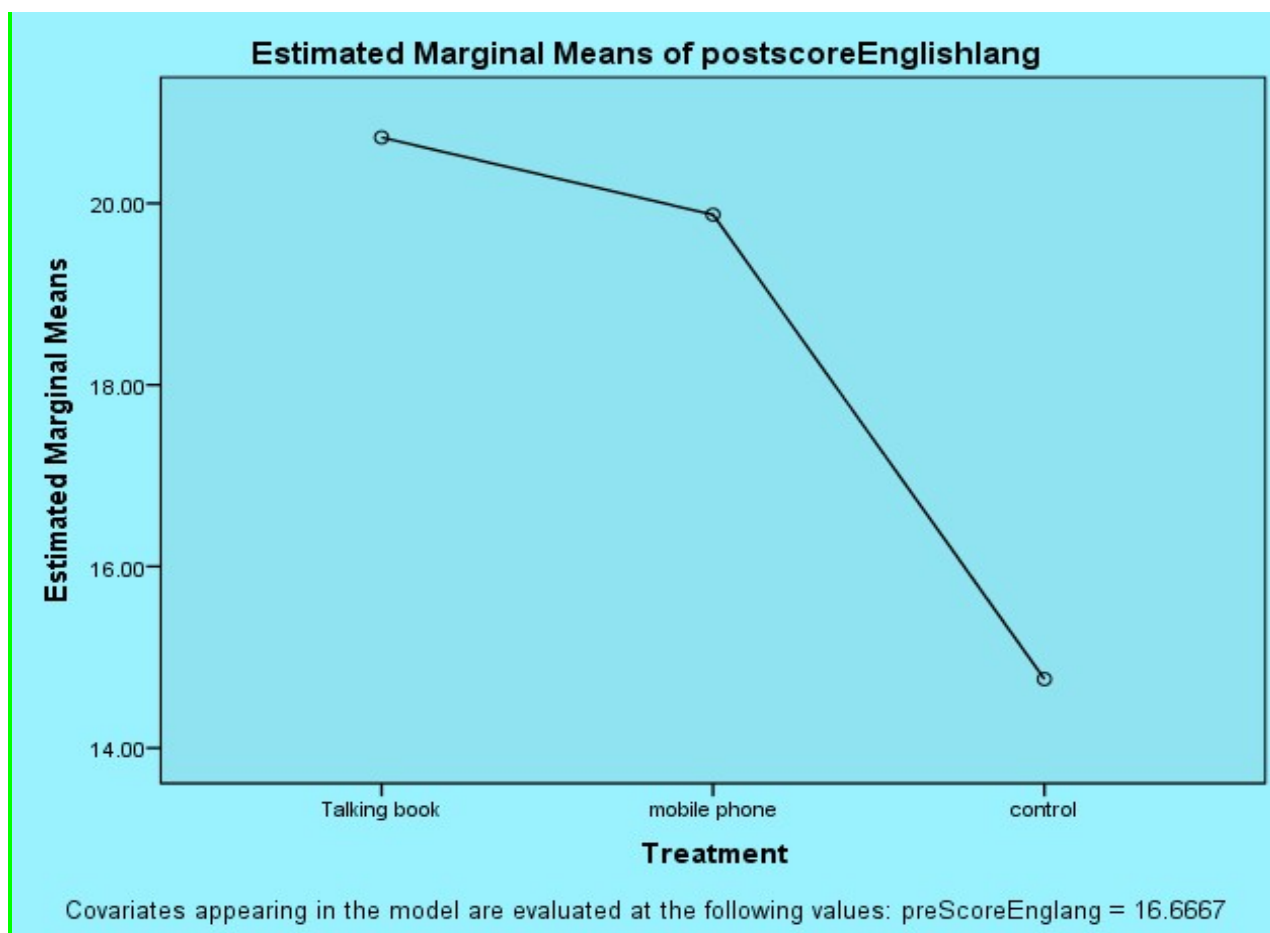
Figure 4.3. Academic Achievement of Adult Learners across the Groups

4.3.2   The Effect of Treatment on Adult Learner' ICT Skill

Ho₁ᵦ: There is no significant main effect of treatment on adult learners' Information, Communication Technology (ICT) Skills.

Table 4.5.   Summary of 3 x 2 x 2 Analysis of Covariance (ANCOVA) on Adult Learners' ICT Skill

ANCOVA

Dependent variable: Post ICT Skill

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	9907.775ᵃ	9	1100.864	63.064	.000	.919
Intercept	3895.583	1	3895.583	223.164	.000	.817
PreICTskills	117.769	1	117.769	6.747	.012	.119
Treatment	2930.788	2	1465.394	83.947	.000	.771
Gender	1.319	1	1.319	.076	.785	.002
Age	12.542	1	12.542	.718	.401	.014
Treatment * gender	.163	1	.163	.009	.923	.000
Treatment * age	1.342	2	.671	.038	.962	.002
gender * age	3.924	1	3.924	.225	.637	.004
Treatment * gender * age	.000	0	.	.	.	.000
Error	872.808	50	17.456			
Total	88181.000	60				
Corrected Total	10780.583	59				

R Squared = .919 (Adjusted R Squared = .904)

It is evident from table 4.5 that there is a significant main effect of treatment on adult learners ICT skills [$F_{(2,50)}$=83.94;p<0.05;η^2=0.771]. Consequently, the null hypothesis Ho1b is rejected. This means that the treatment has a significant main effect on the ICT skills of adult learners with a very large effect size of 77.1%. In order to understand the direction of the significance, a Bonferonni post hoc analysis was computed in the table 4.7

Table 4.6. Estimated Marginal Means of Treatment groups

Dependent Variable: Post ICT skills

| Treatment | Mean | Std. Error | 95% Confidence Interval | |
			Lower Bound	Upper Bound
Talking book	43.136	1.247	40.631	45.641
mobile phone	44.747	1.508	41.718	47.776
Control	18.877	1.645	15.574	22.181

a. Covariates appearing in the model are evaluated at the following values: preICTskills = 21.0333.

Findings as shown by Table 4.6 accounts that the ICT posttest score of adult learners exposed to the mobile phone instructional tools ($\bar{x}$=44.75) is the highest, followed by that of the adult learners exposed to talking book ($\bar{x}$=43.14), and the least ICT posttest score was obtained by ($\bar{x}$=18.87). It can be concluded that mobile phone instructional tool is the best in terms of improving the ICT skill followed by talking book instructional tool.

Table 4.7 Bonferronni post hoc Analysis of Treatment Groups

Dependent Variable: Post ICT Skills

| (I) Treatment | (J) Treatment | Mean Difference (I-J) | Std. Error | Sig.[d] | 95% Confidence Interval for Difference[d] | |
					Lower Bound	Upper Bound
Talking book	mobile phone	-1.611	1.880	1.000	-6.267	3.046
	Control		2.120	.000	19.008	29.509
mobile phone	Talking book	1.611	1.880	1.000	-3.046	6.267
	Control		2.387	.000	19.957	31.781
Control	Talking book	-24.259	2.120	.000	-29.509	-19.008
	mobile phone		2.387	.000	-31.781	-19.957

From table 4.7, the ICT posttest scores of adult learners' exposed to talking book was significantly different from those in the control group but not significantly different from the ICT posttest scores of adult learners exposed to mobile phone. Similarly, the ICT posttest scores of adult learners exposed to mobile phone was also significantly different from that of those exposed to conventional method which is the control. It can then be deduced that the significant main effect of treatment is due to the ICT posttest mean scores of the adult learners exposed to talking and mobile phone instructional tools.
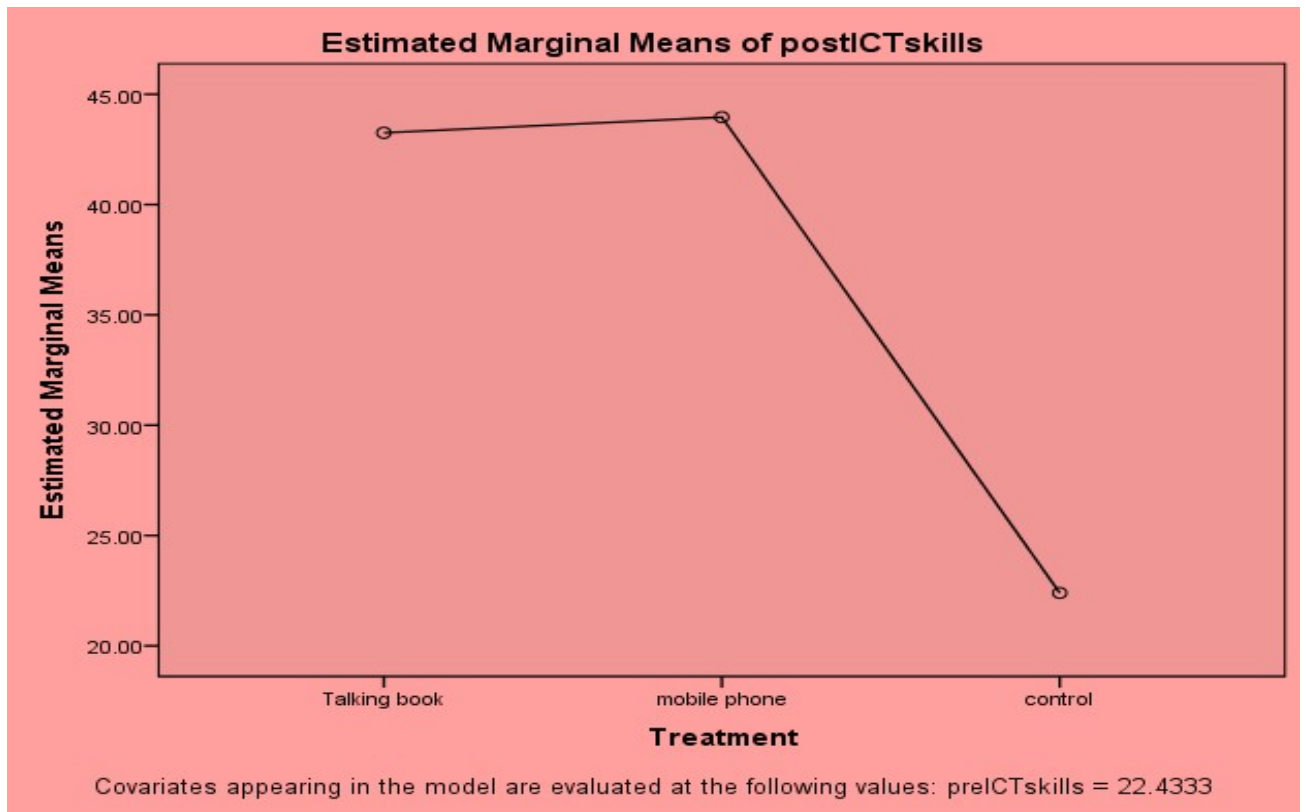
Figure 4.4: Adult Learners' ICT Skill across the Group

4.3.3   The Effect of Treatment on Adult Learner' Attitude to ICT use

Ho1c: There is no significant main effect of treatment on adult learners' attitude to ICT use.

Table 4.8:   Summary of 3 x 2 x 2   Analysis of Covariance (ANCOVA) on Adult Learners' Attitude to ICT use

ANCOVA

Dependent Variable: Post Attitude to ICT

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	363.328[a]	9	40.370	1.029	.431	.156
Intercept	2464.587	1	2464.587	62.827	.000	.557
preattitudestoICT	123.286	1	123.286	3.143	.082	.059
Treatment	49.977	2	24.988	.637	.533	.025
Gender	7.250	1	7.250	.185	.669	.004
Age	.268	1	.268	.007	.934	.000
Treatment * gender	1.937	1	1.937	.049	.825	.001
Treatment * age	182.751	2	91.376	2.329	.108	.085
gender * age	21.330	1	21.330	.544	.464	.011
Treatment * gender * age	.200	1	.200	.008	.992	.000
Error	1961.406	50	39.228			
Total	265536.000	60				
Corrected Total	2324.733	59				

a.   R Squared = .156 (Adjusted R Squared = .004)

Table 4.8 made it clear that there is no significant main effect of treatment on adults learners' attitude to Information and Communication Technology [$F_{(2,50)}=.637;p>0.05$]. For this reason, the null hypothesis Ho1c is not rejected. This explains that the treatment has no significant main effect on the attitude adult learners to ICT use. It can be inferred that the attitude of adult learners' is not dependent to the instructional tools the adult learners are taught with because they all showed similar interest in the use of ICT for English vocabulary learning.

4.3.4   The Effect of Gender on Adult Learners' Achievement in English Vocabulary

Ho2a: There is no significant main effect of gender on adult learner achievement in English vocabulary

Table 4.1 clearly points out that gender has no significant main effect on adult learners' achievement in English vocabulary {$F_{(1,50)} =.196;p>0.05$}. In other words, the null hypothesis Ho2a is not rejected. By implication, age has no significant main effect on adult learners' achievement in English vocabulary.

4.3.5   The Effect of Gender on Adult Learners' ICT Skill

Ho2b: There is no significant main effect of gender on adult learners' ICT skills

Table 4.4 shows that gender has no significant main effect on adult learners' ICT skills {$F_{(1,50)} =.076;p>0.05$}. Invariably, the null hypothesis Ho2b is not rejected; this implies that gender has no significant main effect on adult learners' Information Communication Technology skills.

4.3.6 The Effect of Gender on Adult Learners" Attitude to ICT use

Ho2c: There is no significant main effect of gender on adult learners' attitude to information, communication and technology use

Table 4.7 indicates that there is no significant main effect of gender on adult learners' attitude toward ICT [$F_{(1,50)}=.185;p>0.05$]. Therefore, the null hypothesis Ho2c is not rejected. This explains that gender has no significant main effect on adult learners' attitude to ICT. Thus, it can be inferred that adults learners attitude to ICT use is not dependent on their gender because they all showed similar interest in ICT use.

4.3.7 The Effect of Age on Adult Learners' Achievement in English Vocabulary

Ho3a: There is no significant main effect of age on adult learners' achievement in English vocabulary.

Table 4.1 discloses that age has no significant main effect on adult learners' achievement in English vocabulary [$F_{(1,50)}$=1.083;p>0.05]. Following this, the null hypothesis Ho3a is not rejected. This accounts for why age of adult learners has no significant main effect on adult learners' achievement in English vocabulary.

4.3.8 The Effect of Age on Adult learners' ICT Skill

Ho3b: There is no significant main effect of age on adult learners' ICT skills

Table 4.4 indicates that age has no significant main effect on adult learners' Information Communication and Technology skills [$F_{(1,50)}$=0.718;p>0.05]. As a result the null hypothesis Ho3b is not rejected. This implies that the age of the adult learners does not determine their ICT skills.

4.3.9 The Effect of Age on Adult Learners' Attitude to ICT use

Ho3c: There is no significant main effect of age on adult learner' attitude to information, communication and technology use

Table 4.7 presents the result that there is no significant main effect of age on adult learners' attitude toward ICT [$F_{(1,50)}$=.007;p>0.05]. Invariably, the null hypothesis Ho3c is not rejected. This implies that age has no significant main effect on adult learners' attitude to ICT use. Therefore, it can be concluded that adults learners attitude to ICT is not dependent on their age for they all showed similar interest in ICT use.

4.3.10 The Interaction Effect of Treatment and Age on adult Learner' Academic Achievement in English Vocabulary

Ho4a: There is no significant interaction effect of treatment and gender on adult learners' achievement in English vocabulary

Table 4.1 shows that there is no significant interaction effect of treatment and gender on adult learners' achievement in English vocabulary {$F_{(1,50)}$ =.595;p>0.05}. Therefore, the null hypothesis Ho4a is not rejected. This explains that the effects of

treatment on posttest achievement mean score of adult learners' in English vocabulary is not dependent on the adult learner' gender

4.3.11 The Interaction Effect of Treatment and Age on Adult learners' ICT Skills

Ho4b: There is no significant interaction effect of treatment and gender on adult learners' ICT skills

Table 4.4 reveals that there is no significant interaction effect of treatment and gender on adult learners' ICT skills {F $_{(1,50)}$ =.009;p>0.05}. Therefore, the null hypothesis Ho4b is not rejected. Obviously from this finding, the effects of treatment and gender on adult learners' ICT skills posttest mean score is not dependent on their gender.

4.3.12 The interaction Effect of Treatment and Gender on Adult Learners Attitude to ICT use

Ho4c: There is no significant interaction effect of treatment and gender on adult learner' attitude to information, communication and technology use

Table 4.7 indicates that there is no significant interaction effect of treatment and gender on adult learners' attitude to ICT use [F$_{(1,50)}$=.049;p>0.05]. Therefore, the null hypothesis Ho4c is not rejected. This implies that treatment and gender have no significant interaction effect of adult learners' attitude towards ICT. Apparently from this study, adult learners' attitude towards ICT is not dependent on the interaction of treatment and gender. In order words, adult learners' attitude to ICT use has nothing to do with whether they are male or female or the type of ICT instructional tool used in content delivery.

Ho5a: There is no significant interaction effect of treatment and age on adult learners' achievement in English vocabulary

As shown by table 4.1, there is no significant interaction effect of treatment and age on adult learners' achievement in English vocabulary {F $_{(1,50)}$ =1.066;p>0.05}. Therefore, the null hypothesis Ho5a is not rejected. This signifies that the effect of treatment on posttest achievement mean score of adult learners' in English language is not dependent on adult learners' age.

4.3.13 The interaction Effect of Treatment and Age on Adult Learners' ICT Skill

Ho5b: There is no significant interaction effect of treatment and age on adult learners' ICT skills

Table 4.4 states that there is no significant interaction effect of treatment and age on adult learners' ICT skills $\{F_{(1,50)} = .038; p > 0.05\}$. Therefore, the null hypothesis Ho5b is not rejected. This denotes that the effect of treatment posttest on the mean score of adult learners' in ICT skills is not dependent on adult learners' gender.

4.3.14 The Interaction Effect of treatment and Age on Adult Laerners' Attitude to ICT use

Ho5c: There is no significant interaction effect of treatment and age on adult learner' attitude towards information, communication and technology use

Table 4.7 indicates that there is no significant interaction effect of treatment and age on adult learners' attitude toward ICT $[F_{(2,50)} = 2.239; p > 0.05]$. Therefore, the null hypothesis Ho5c is not rejected. This out rightly shows that treatment and age have no significant interaction effect on adult learners' attitude towards ICT. It can be inferred that adults learners attitude to ICT is not dependent on the interaction of treatment and age.

4.3.15 The Interaction Effect of Gender and Age on Adult Learners' Academic Achievement in English Vocabulary

Ho6a: There is no significant interaction effect of gender and age on adult learners' achievement in English language

Table 4.1 evidently states that there is no significant interaction effect of treatment and age on adult learners' achievement in English language $\{F_{(1,50)} = .004; p > 0.05\}$. Therefore, the null hypothesis Ho6a is not rejected. This signifies that the effect of age posttest achievement mean score of adult learners' in English language is not dependent on the adult learners' gender.

4.3.16 The Interaction Effect of Gender and Age on Adult Learners' ICT skill

Ho6b: There is no significant interaction effect of gender and age on adult learners' ICT skills

In table 4.4, one of the findings shows that there is no significant interaction effect of gender and age on adult learners' ICT skills {F $_{(1,50)}$ =.225;p>0.05}. Following this, the null hypothesis Ho6b is not rejected. This implies that the effect of age posttest achievement mean score of adult learners' ICT skills is not dependent on the adult learners' gender.

4.3.17 The Interaction Effect of Gender and Age on Adult Learners' Attitude to ICT use

Ho6c: There is no significant interaction effect of gender and age on adult learner' attitude to information, communication and technology use

The result from table 4.7 unveils that there is no significant interaction effect of gender and age on adult learners' attitude to ICT use [$F_{(1,50)}$=.544;p>0.05]. Therefore, the null hypothesis Ho6c is not rejected. This provides insight to the fact that gender and age have no significant interaction effect on adult learners' attitude to ICT. Therefore, it can be deduced that adults learners attitude to ICT is not dependent on the interaction effect of gender and age because they all showed similar interest to ICT use for content delivery

4.3.18 The Interaction Effect of Treatment, Gender and Age on Adult Learners' Academic Achievement In English Vocabulary

Ho7a: There is no significant interaction effect of treatment, gender and age on adult learners' achievement in English vocabulary

Table 4.1 mark out plainly that there is no significant interaction effect of treatment, gender and age on adult learners' achievement in English vocabulary {F $_{(0,50)}$ =.001;p>0.05}. Therefore, the null hypothesis Ho7a is not rejected. This denotes that the effect of treatment on posttest achievement mean score of adult learners' in English vocabulary is not dependent on their gender and age when taken together.

4.3.19 The interaction Effect of Treatment, Gender and Age on Adult Learners' Academic Achievement in English Vocabulary

Ho7b: There is no significant interaction effect of treatment, gender and age on adult learners' achievement in English Vocabulary

Table 4.4 shows that there is no significant interaction effect of treatment, gender and age on adult learners' ICT skills {F $_{(0,50)}$ =.002;p>0.05}. Therefore, the null hypothesis

Ho7b is not rejected. This implies that the effect of treatment on posttest achievement mean score of adult learners' ICT skills is not dependent on the interaction effect of treatment, gender and age when taken together.

4.3.20 The Interaction Effect of Treatment, Gender and Age on Adult Learners' Attitude to ICT use

Ho7c: There is no significant interaction effect of treatment, gender and age on adult learner' attitude to information, communication and technology use

Table 4.7 indicates that there is no significant interaction effect of treatment, gender and age on adult learners' attitude toward ICT [$F_{(1,50)}=.008; p>0.05$]. Therefore, the null hypothesis Ho7c is not rejected. This connotes that treatment; gender and age have no significant interaction effect on adult learners' attitude towards ICT. Therefore, it can be concluded that adults learners attitude towards ICT is not dependent on the interaction effect of treatment, gender and age .In order words, age, gender and the type of instructional tools used in content delivery do not affect adult learners' attitude to ICT use.

4.4 Discussion of Result

4.4.1 ICT tools used for instructional delivery in ICT-based learning in adult literacy programme

The findings of this study showed that ICT tools are yet to be deployed into adult literacy programme for instructional delivery. This finding showed that the medium of instructional delivery is still largely done through conventional approach. This implied that all the efforts being made by the federal government through the Federal ministry of education and other stake holders in private sector in deploying ICTs into the mainstream of education and training in Nigeria in a bid to achieve the objectives of National ICT policy is yet to trickle down to adult and non-formal education. In reacting to this state of adult literacy education in the country, Adelore (2016) observed that learning tend to be passive, factual, knowledge based and sometimes happen in isolated artificial context because teaching and learning is carried out through the conventional method. She further reiterated that the integration of ICT into adult literacy programme would expand learners' access and participation in adult literacy education, serve as vital tools for lifelong activities and expose facilitators to best literacy practices obtained anywhere in the world.

4.4.2 Learners' experience using Talking books and mobile phones as instructional tools for learning English vocabulary

The findings from this study indicated that learners found the use of talking book and mobile phone easy and interesting for English vocabulary learning. This may be attributed to the design of the instructional package in linear format which aids easy navigation of content on the ICT tools. This finding supports the findings of Adelore (2017) that the adoption of linear programming in designing the interfaces of ICT-based instructional content makes learning simple and easy, removes complications when interacting with the content and other learning activities. This finding is at variance with Adedoja, Adelore, Egbkhare and Oluleye (2013) which revealed that learners found it difficult to navigate on the interface of the mobile plat form. They further suggested that the design of interface should facilitate ease of navigation even by low ICT skilled learners. In addition, the orientation programme held at the inception of the study and learners support made available throughout the course of study dealt with phobia for technology which encouraged learners to own, use and acquire skills required for interaction. Orientation and learners' support is a major key to achieving success in a virtual learning environment especially among adult learners. This finding is underscored by Adedoja, Adelore, Egbkhare and Oluleye (2013) that learners should be well orientated on how the interface works to ensure easy transfer of learning situation.

4.4.3 The mean gain of adult learners according to treatment in academic achievement in English vocabulary, ICT skill and attitude to ICT use.

The findings revealed that there is an increase in the mean scores of adult learners' academic achievement in English vocabulary, ICT skill and attitude to ICT use as a result of the intervention. This implies that the use of ICT as instructional tools in adult ESL programme has the potential of improving learners' English vocabulary, ICT skill as well as helping adult learners' gain confidence towards ICT use.

4.4.4 The relevance of instructional package to learners need and experience in learning English vocabulary.

In depth interview guide was used to obtain information on the facilitator' view and opinion on the relevance of the ICT-based instructional package deployed on the ICT

devices for English vocabulary learning to learners' needs and experience. The facilitators affirmed that the ICT-based instructional package was relevant to learners' need and experience. They also explained that the content of the package was informative and educative exposing learners to happenings around them. This finding is in agreement with one of the assumptions of Malcolm Knowles (1984) on adult learning that learning for adults should be relevant to their needs and experience. It is also in support with Day and Grewan (2003) in Adelore (2010) that ICT tools for learning must be consumer oriented and context/ culture sensitive. Furthermore, facilitator also commented on how the package helped learners to acquire more English vocabulary thereby improving their reading skill and speed which is the major reason some learners enrolled in the literacy programme so that they can use English language effectively in their work place and societal settings which corroborated the findings of Nisbet and Austin (2013).

Comments:

Facilitator 1: Yes. For instance majority of the learners are farmers and learning from one of the module that talked on farming really gave them a great insight to modern day farming and different ways of farming on a large scale. Also, one of the lessons exposed them to different ways people can be involved in drug abuse without necessarily getting involved in the use of hard drugs. Now I believe that no one will even go to any chemist shop to get medications when they are sick without getting to the health care center first because of the information they now have

Facilitator 2: Most of the topics raised in the content are issues that are happening around us. The content is expository and informative opening learners eye so that they can be more aware of happenings around them.

Facilitator 1: Interestingly, majority of these learners now come early to class just purposely to use this device to read which was not the case when these devices have not been introduced From my observation as their facilitator it has really helped to learn new more words.

Facilitator 2: We now see adults learners going around with their phones studying the content on it and for those who did not have smart phones are now making efforts to get so that they would have the opportunities to study after the class. So one can conclude that this device increase learners desire to read and learn new words.

4.4.5 Effect of Treatment on Adult Learners' Achievement in English Vocabulary, Information and Communication Technology Skills and Attitude to ICT

The findings of this study revealed that the treatment had a significant main effect on adult learners' achievement in English vocabulary. This implies that deploying ICT as instructional tools in adult ESL programme for adult learners is potent in terms of improving their achievement in English vocabulary. This finding is in consonance with Urun, (2016), Parvin and Salam, (2015), Olszak (2015), Begum (2011) and Yunus, Lubis, and Lin, (2009) who established that the use of ICT in English language learning has effect on academic achievement of learner who used ICT in learning ESL compared with learners who were taught using conventional approach. The result further indicated that the posttest mean scores of adult learners exposed to talking book and mobile phone instructional tools were responsible for the main effect of treatment. In order words, learners exposed to ICT based instructional tools performed better than learners exposed to conventional method of instruction. The result further showed that adult learners exposed to talking book did better in English language compared with their counterparts who were taught with mobile phone and conventional method. This is also in agreement with Adelore (2007) findings on the effective use of talking book as ICT-based tool for instruction in ESL teaching in adult literacy programme, which showed a remarkable improvement in adult learners achievement in English language and also encouraged collaborative learning of reading task among adult learners especially outside the classroom, thus, availing the learners the opportunity to learn at their own pace and their own convenience. This may be attributed to the fact that talking book engaged and appealed to the senses of sight and particularly that of hearing of adult learners as a result of the speech component present. This provides learners with the advantage of listening to the content in addition to reading thereby enriching their reading experience (Denise, 2003). Yunus, Nordin, Salehi, Embi & Salehi, (2014), also supports this findings by their assertion that Talking book helps learners learn to read through support features offered, such as narrations, feedback and sound effect.

Similarly, the study indicated that the treatment had a significant main effect on adult learners' information and communication technology skills. This implies that the ICT skills of adult learners can only be developed when the instructional tools used to teach them is ICT based through the continuous use of ICT tools and not theoretical teaching of ICT use.

The findings of the study also indicated that adult learners exposed to mobile phone instructional tools had higher ICT skills posttest scores compared to their counterpart exposed to talking book. This implies that to develop ICT skills of adult learners the mobile phone is a suitable device to develop their ICT skills perhaps because they have access to mobile phones and explore it more than the Talking books. This is similar to what obtained in Zelezyn-Grewn (2017), that mobile phone has been discovered to be a medium that have impacted the ability of number of people in benefitting from ICT skill development. Tyers (2012), showed that ICTs like mobile phones can help create increased confidence in being able to use ICT. Invariably, if mobile users are able to learn English language using mobile phones, then it followed that they would be able to learn to use other ICTs.

On the other hand, the treatment had no significant main effect on the attitude of adult learners' to ICT use. This implies that adult learners' attitude does not depend on the ICT tool used in instructional content delivery. It can also be inferred that attitude takes a long time to be formed and the experiment is just within few weeks. This result negates the findings of Gonzalez, Ramirez and Viadel (2015), which showed that ICT tools for learning have a significant effect on adult learners' attitude. He asserts that attitude is immediately formed after the first brief moment of contact with ICT in population of adult with low level of education.

4.4.6 Effect of Gender on Adult Learners' Achievement in English Vocabulary, Information and Communication Technology Skills and Attitude to ICT

The result of this study reveals that the gender of the adult learners' does not have any effect on adult learners' achievement in English language, information and communication technology skills and attitude towards ICT. This implies that gender of the adult learners does not give them any advantage or disadvantage as far as their achievement in English language, information and communication technology skills and attitude to information and communication technology is concerned.

The findings that gender has no effect on adult learners' achievement in English vocabulary from this study is in congruent with the findings of Yassin (2015), that gender did not play any significant role in the academic achievement of learners ESL scores. In other words, being male or female was not a factor that could improve or decline the level of language performance of ESL learners. Nevertheless, this result negates the findings of

Glowka (2014) and Junaid (2015), who assert that there exist gender differences in the academic achievement of learners in English as second language.

Another fact that seems evident from the result is that gender has no effect on adult learners' ICT skill. This indicates that there is no significant difference between male and female in their ICT skills. This finding is confirmed by Rhema and Miliszewska (2014) who revealed that no gender disparity exists in learners attitude to ICT use and ICT utilization in language instruction among learners (Danner and Pessu, 2013). However, this finding negate the findings of Kubiatko (2010), that supports the view that males are more adept than females in ICT use, males are more knowledgeable about ICT than females and that being female negatively affects the chances of someone being skilled in ICT use.

The result on the effect of gender on learners' attitude to ICT shows that irrespective of gender disparity, learners' attitude to ICT use was the same. This finding lends credence to recent studies that found no gender differences in relation to attitudes towards ICT use. Meaning attitudes of males and females learners to ICT use for learning purpose are similar (Fabunmi, 2013, Adenuga, Owoyele and Adenuga, 2012)

4.4.7 Effect of Age on Adult Learners' Achievement in English Language, Information and Communication Technology Skills and Attitude to ICT

The result of this study reveals that the age of the adult learners' does not have any effect on adult learners' achievement in English language, information and communication technology skills and attitude towards ICT. This implies that the age of adult learners does not give them any disadvantage or advantage as far as their achievement in English vocabulary, information and communication technology skills and attitude to information and communication technology is concerned.

In examining the effect of age on adult learners ICT use, the findings from this study established that age does not have effect on learners' attitude to ICT use. This is in line with finding of Jegede (2009) that age does not significantly affect attitude of users to ICT use. On the contrary Kusumaningtyas (2015), concluded that there is significant difference in ICT adoption, ICT skill and ICT use based on age and education level of learners while Chang, Shieh and Liu, (2012), revealed that older adult users have been found to lag behind

others in ICT use and they tend to use ICT less than younger adults (Busemann & Gscheidle, 2011).

4.4.8 Interaction Effect of Treatment and Gender on Adult Learners' Achievement in English Vocabulary, Information and Communication Technology Skills and Attitude to ICT

The result of this study reveals that the treatment and gender of the adult learners' do not have any interaction effect on adult learners' achievement in English vocabulary, information and communication technology skills and attitude towards ICT. This implies that the gender of the adult learners does not give them any disadvantage or advantage as far as the effect of the treatment on the achievement in English vocabulary, information and communication technology skills and attitude to information and communication technology is concerned. Both males and females benefited equally on the effect of treatment. This result explains that being male or female does not in any way affect the medium of instruction through which adult learners were exposed to English vocabulary learning. This point out that the treatment is good for both male and female learners and would contribute to their achievement in English vocabulary. This findings support the conclusion of Ojetola (2015), that gender has no significant effect on learners' learning outcome.

On the contrary, Abimbade (2015), submitted that there is a significant relationship between ICT and gender on learner's academic achievement. The findings revealed that male learners exposed to ICT–based instruction had higher mean score than their female counterparts.

4.4.9 Interaction Effect of Treatment and Age on Adult Learners' Achievement in English Vocabulary, Information and Communication Technology Skills and Attitude to ICT

The result of this study reveals that the treatment and age of the adult learners' do not have any interaction effect on adult learners' achievement in English vocabulary, information and communication technology skills and attitude to ICT use. This implies that the age of the adult learners does not give them any disadvantage or advantage as far as the effect of the treatment on the achievement in English vocabulary, information and

communication technology skills and attitude to information and communication technology is concerned. Both young and old adults learners benefited equally on the effect of treatment.

4.4.10 Interaction Effect of Gender and Age on Adult Learners' Achievement in English Vocabulary, Information and Communication Technology Skills and Attitude to ICT

The result of this study reveals that the gender and age of the adult learners' do not have any interaction effect on adult learners' achievement in English vocabulary, information and communication technology skills and attitude to ICT use. This implies that the age of the adult learners does not give them any disadvantage or advantage as far as the effect of the gender on the achievement in English language, information and communication technology skills and attitude to information and communication technology is concerned. Therefore, age and gender did not mutually influence the dependent variables to produce a joint effect. This finding contradicts the findings of Dev and Qiqieh (2016), who established that there is a relationship between academic achievement and other variables such as gender, age and year of study.

4.4.11 Interaction Effect of Treatment, Gender and Age on Adult Learners' Achievement in English Vocabulary, Information and Communication Technology Skills and Attitude to ICT

The result of this study reveals that the treatment, gender and age of the adult learners' do not have any interaction effect on adult learners' achievement in English vocabulary, information and communication technology skills and attitude to ICT use. This implies that the age and gender of the adult learners do not give them any disadvantage or advantage as far as the effect of the treatment on the achievement in English vocabulary, information and communication technology skills and attitude to information and communication technology is concerned. In other words, young and old (male and female) adults learners benefited equally on the effect of treatment. This finding advances the knowledge that age and gender do not influence ICT use and this supports the findings of Genc and Aydin (2011), that there were no statistical differences between some selected demographic variables as learners' age, gender, grades, compulsory and optional status, type of school, parents' educational status, the period of the participants' language-learning process, and experience of ICT use.

CHAPTER FIVE

SUMMARY, RECOMMENDATIONS AND CONCLUSION

5.1   Summary of findings

The followings are the summary of the findings from data analysis and interpretation in the study.

1)   ICT tools are not used for instructional delivery in adult literacy programme

2)   Learners find the use of Talking book and mobile phone for learning English vocabulary easy and interesting

3)   ICT-based instructional package is relevant to learners' need and experience in learning English vocabulary

4)   There is significant main effect of treatment on adult learners' achievement in English   vocabulary

5)   There is significant main effect of treatment on adult learners' ICT skill

6)   There is no significant main effect of treatment on adult learners' attitude to ICT use

7)   There is no significant main effect of gender on adult learner' achievement in English vocabulary, ICT skill and attitude to ICT use

8)   There is no significant main effect of age on adult learners' achievement in English vocabulary, ICT skill and attitude to ICT use

9)   There is no significant two-way interaction effect of treatment and gender on adult learners' achievement in English vocabulary, ICT skill and attitude to ICT use

10)   There is no significant two-way interaction effect of treatment and age on adult learners' achievement in English vocabulary, ICT skill and attitude to ICT use

11)   There is no significant two-way interaction effect of gender and age on adult learners' achievement in English vocabulary, ICT skill and attitude to ICT use

12)   There is no significant three-way interaction effect of treatment, gender and age on adult learners' achievement in English vocabulary, ICT skill and attitude to ICT use

5.2   Conclusion

This study shows how ICT can be implemented in adult literacy programme. It also established that adult learners' achievement in English vocabulary and information and communication and technology skills can be successfully developed and improved upon if

learners are exposed to ICT-based instructional tools like Talking Books and mobile phone irrespective of their age and gender. In addition, this study also revealed that adult learners given necessary support and encouragement can benefit from ICT based literacy programme irrespective of their age and gender which negate the myth of adult learners and technology tyranny.

5.3   Educational Implication of the Findings

The study has shown that ICT is a practicable and effective tool for instructional delivery in adult literacy education programme particularly in the area of English vocabulary instruction as it helps to improve adults learners' academic achievement in English vocabulary and consequently ICT should be integrated into adult literacy education programme.

Gender and age have been classified as variables that bring about disparities among ICT users. However, this study revealed that gender and age do not pose any barrier to adult learner use of ICT in English vocabulary acquisition and development rather learners benefitted equally from ICT-based learning programme which is not based on theory but on actual utilization of ICT tools irrespective of their gender and age. Adult learners also tend to benefit from ICT-based learning provided they have necessary support and encouragement.

ICT skill is seen as a prerequisite for ICT use and to be able to manipulate ICT tools for the purpose of learning, it requires that learners acquire a considerable amount of skill for effective use. This implies that for adult learners to use ICT for the purpose of learning they must acquire certain amount of ICT skill. This study shows that adult learners ICT skill can be developed and improved upon through the use of mobile phones. Also, before adult learners are exposed to other ICT instructional tools like desktop, laptop, tablets and others adult learners ICT skill development should start from mobile phone use because of its ubiquity.

5.4   Contribution to Knowledge

The instructional content for this study was developed locally, drawn from societal issues like security, voting right, parenting among others reveals local realities thereby

bringing familiarity and relevance to the lives of learners. Learners were able to interact well with the content and the ICT devices on which it was deployed. This also helps in removing the problem of content and culture insensitivity associated with most imported technologies when their content are used for learning.

The design and development of the instructional package in linear format aids easy navigation of content on both the Talking Book and mobile phone. In addition, the hypermedia elements like illustrations, narrations especially highlighted words which when tapped provides an instant meaning to the vocabulary also foster vocabulary acquisition and development

ICT applications used for the purpose of learning in adult literacy education in this study makes learning takes place on offline mode and makes access to instructional content available anywhere, anytime and anyhow thereby making bandwidth no longer a problem to learning.

Orientation programme held for this experiment encouraged the adoption of technology among adult learners irrespective of their age and gender. The orientation held and learners' supports made available throughout the course of the study dealt with phobia for technology thereby encouraging learners to own, use and acquire skills required for interaction.

Adult learners ICT skill was developed and improved irrespective of their gender and age because the development of their ICT skill started from the ICT tools they are familiar- mobile phones which serves as a take off point to learners before being introduced to a more complex ones.

5.5   Recommendations

These recommendations are made based on the findings from this study:

Instructional contents in adult literacy programmes should be designed by National Commission for Mass Literacy, Adult and Non-Formal Education (NMEC), Oyo State Agency for Adult and Non-formal Education (AANFE) to incorporate ICT use which would help to allay the fear some adult learners have towards ICT use and thereby bridge the gap of digital divide that exist among adult learners.

Adult learners should be exposed to ICT-based learning programmes as this would help in improving their academic achievement, encourage independent and active learning and also gives opportunity for continuous learning outside the classroom.

Talking book should be made one of the ICT instructional tools to be used to teach ESL particularly reading and vocabulary acquisition by NMEC in adult literacy education programme.

The development of adult learners ICT skill should start from mobile phone use which learners tend to be more familiar with and find easy to use for learning purpose afterwards they can be exposed to a more complex ICT instructional tools.

Capacity building for facilitators should be carried out by AANFE on how to use ICT as instructional tools for content delivery so as to support, enhance and enrich the teaching and learning process.

Adult learners, male and female, old and young should be encouraged and given the necessary support by trained facilitators in using ICT instructional tools during the learning process which would help them to equally take advantage of ICT-based learning programme irrespective of their age and gender.

There is need for provision to be made by NMEC for the integration of ICT into adult literacy education programme in Nigeria; appropriate and adequate ICTs instructional tools deployed to adult literacy centers across the nation.

5.6   Limitations to the study

The limitation of the study includes the fact that the study covered only three adult literacy centers. The study was carried out using adult learners in intermediate class; only six topics in English language were covered and among moderating variables only two (gender and age) were used.

Another limitation of the study is the phobia for technology. This phobia made some stop participating in this study believing that it is difficult to use ICT especially for the purpose of learning. Initially, others too exhibited this fear which made them to be withdrawn from participating in the class activities but after several encouragement and support their confidence were built up which helped them to take advantage of the ICT-based learning programme.

The location of the adult literacy centers to the residence of some adult learners is another limitation to this study. Some learners who could have participated in this study complained of the distance of the literacy centers to their various houses.

The peculiarity of adult learners being adults with social responsibilities which make them irregular in class could have made the result different if regular school students were used is another challenge faced in the course of this study.

5.7   Suggestions for further Studies

The study should be replicated to cover more adult literacy centers in Oyo state and other states across the federation. It should also be made to cover more participants and subjects as this will make the findings from such studies to be more generalisable. Further studies can also be carried out using other ICT applications designed for educational purposes.

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Appendix I

Instructional Package

This instrument is developed by the researcher. It is a set of instructional package designed for Talking book, mobile phone and control group. This package was designed and developed using ADDIE Model and ICT-Based Learning Lesson Plan Template. It embodies content is locally sourced from topics ranging from Health, Security, Parenting, Voting Rights, Drug Abuse and Farming among others within the Nigerian context based on the curriculum in use, with focus on vocabulary acquisition and instruction.

MODULE 1

DRUG ABUSE

Table of Contents

Introduction

UNIT 1: Drug Abuse

UNIT 2: Ways of abusing drugs, effects and prevention

Introduction

Drug and substance abuse is a serious problem in our society. Many of us are involved in various forms of drug abuse. This happens either when we wrongly use drugs that are prescribed by a doctor, when we use drugs that not prescribed by a doctor or when we use hard drugs. Hard drugs are dangerous drugs. There is increase in the use of hard drugs, especially among youths. Hard drugs destroy lives of those who use them. One of the ways to prevent or stop drug abuse is to educate people on the different ways we abuse drugs and how to stop or prevent it. This module shall help us to understand the meaning of drug and substance abuse, ways we abuse drugs, its effects and how to prevent its spread.

This module contains two units as follow.

UNIT 1: Drug Abuse

**UNIT 2: Ways of abusing drugs, their effects and prevention**

UNIT 1: Drug Abuse

Objectives:

At the end of this unit, you should be able to:

- Explain 'drug abuse'
- Mention ways people abuse drugs
- Give the meaning of the highlighted words in the passage and use them in correct sentences

Mr. Makanju is a driver. One morning he became so sick that he could not drive his bus. He decided to **approach** a roadside chemist to buy some **medications**. He took the medications quickly because he wanted to get well fast. But instead of getting better his **sickness** became worse. His friends at the motor park rushed him to the hospital when his condition became very bad. They were afraid that their friend would die.
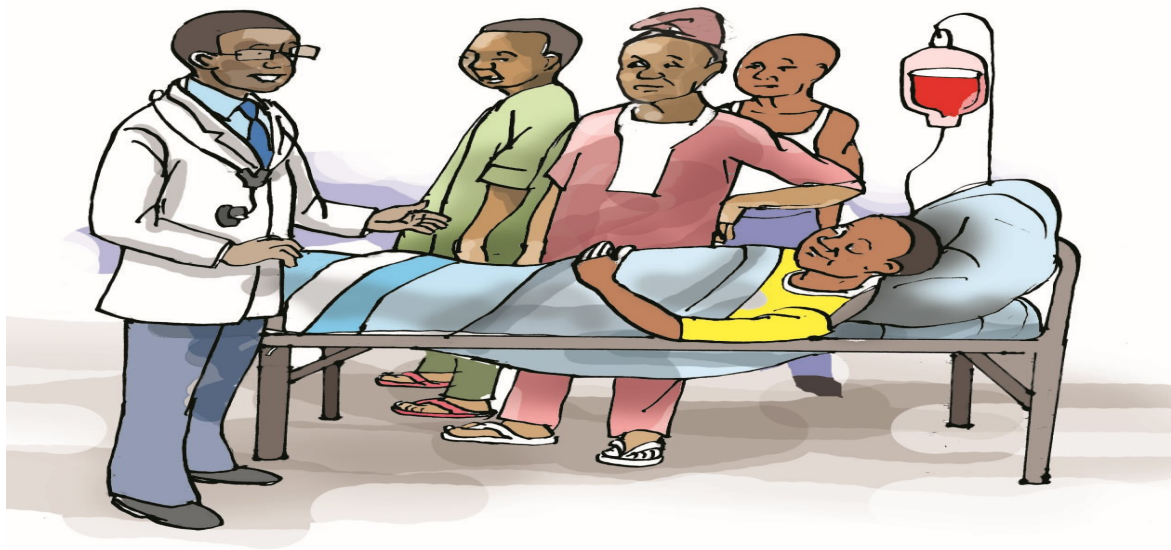
Doctor Omololu attended to Mr. Makanju. When he was told that Mr. Makanju had already taken some medications that he bought at a rodside chemist, he was not happy. He told Mr. Makanju and his friends that what he did is called drug abuse. "Drugs should be **prescribed** by a doctor in a good hospital and the **instructions** written on the drugs should be followed", he told them.

Doctor Omololu told Mr. Makanju's friends that their friend became sick because he did not take enough rest. He also told them that Mr. Makanju should have come to the hospital to collect the right drugs for his sickness. Drugs are medications that we take orally or through injection to reduce, or stop our pains, and to make us get better when we are sick.

Mr. Adegbayi, Makanju's friend, was **confused.** He asked the doctor to explain better what drug abuse is. He said he thought that only people who take hard drugs like marijuana, codeine, valium or cocaine are the ones involved in drug abuse. The doctor told him that drug abuse means the use of drug in the wrong way. This is the most common way of abusing drug. "Drugs are meant to **cure** but you can **harm** yourself when you use more than you need", doctor Omololu explained.

Learning point

- Drugs are medications we take orally or through injection to reduce, or stop our pains or to make us get better when we are sick.
- Drug abuse is the use of drug in the wrong way.
- Marijuana, codeine, valium and cocaine are hard drugs people take that get them involved in drug abuse.
- The most common form of drug abuse is taking overdose of drugs.

Activities

Match the words in the left boxes with their correct meaning as provide in right boxes below. For example:

Prescribe	Move towards
Cure	Drugs given to sick people
Instruction	Unhealthy condition of the body
Approach	To direct the use of something
Sickness	An outline to be followed
Medication	To heal a disease

Tasks:

Fill in the blank spaces with correct answer from option A-D

i)   Drug abuse is the ------------------------------
        A) Right way of using drugs   B) Good way of using drug
        C) Wrong way of using drugs   D) Taking drugs always

ii)   ………………….. is the common form of drug abuse
        A) Oversleep   B) Overeat   C) Overtake   D) Overdose

Choose the options that have the same meaning as the words in bold:

iii) Medications

    A) Drugs given to people who are sick B) Food given to people who are sick

    C) Place where sick people are kept   D) Name given to sick people

iv) Cure

    A) To clean up a house   B) To show someone what to do

    C) To take sick people to the hospital   D) To make somebody who is sick well again

v) Prescribe

    A) To queue up for drugs at the hospital

    B) To say what drugs a sick person should take to be well

    C) To take the sick to the hospital

    D) To care for the sick at home

UNIT 2: Ways of Abusing Drugs, Effects and Prevention

Objectives:

At the end of this unit, you should be able to:

- Describe at least two ways by which people abuse drugs
- Mention at least five effects of drug abuse
- List three ways of preventing drug abuse
- Give the meaning of the highlighted words in the passage and use them in correct sentences

 "Sometimes people use drugs that doctors did not prescribe or give them. This is very dangerous. Some people practice drug abuse by using sleeping tablets. Sometimes, they do this because they are tired and want to sleep for long hours."

"A person can abuse drug by drinking too much alcohol and by smoking cigarette. If a person continues in this act for a long time, the body will get used to it. This will make the person to want to use it all the time. This is called drug addiction," Dr. Omololu continued.

"Sir, I am very afraid. My friend cannot talk again. Is this the only thing that can happen if a person abuse drug?" Mr. Adegbayi asked. "No", the doctor replied. "There are lots of bad

things that can happen if we abuse drugs. It can lead to mental illness like madness and inability to remember things. Other effects of drug abuse include **depression,** loneliness, low self-esteem, high blood pressure, and despair. It can also make people get sick most of the time. Finally, it can lead to death.

 "We can prevent drug abuse by using our medications the right way and by buying medications only from **pharmaceutical** stores that government approved. Whenever we are sick, we should go to the hospital. We should also avoid bad friends who can force us to use hard drugs."

"Anyone that wants to live a long healthy life should not abuse drug. Mr. Adegbayi., your friend is so lucky today. Next time, he might not be so lucky", doctor Omololu concluded. "From now on I will **educate** my friends at the Motor Park on drug abuse", Mr. Adegbayi promised.

Learning Points

- People abuse drugs by taking drugs not prescribed by doctor and by smoking or drinking too much alcohol.
- Effects of drug abuse include **depression**, mental illness, high blood pressure and death.
- Drug abuse can be prevented by following the instructions of the doctor when we use medications; by buying medications only from registered pharmaceutical shops and by avoiding bad friends that can force us to take hard drug.

Activities:

Fill in the boxes with effects of drug abuse as shown below:
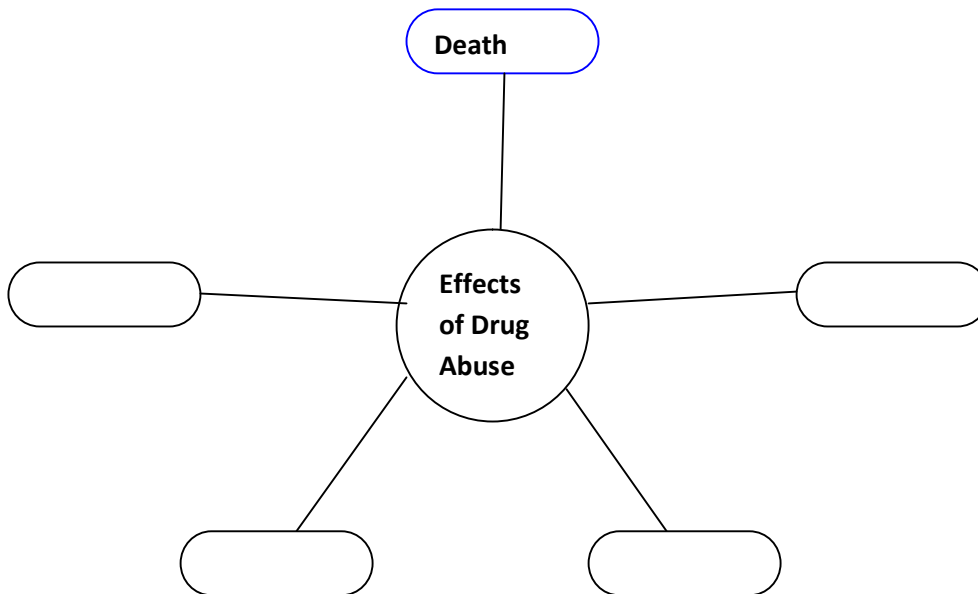
Tasks

Fill in the blank spaces with the correct options from A-D

i)   The followings are the effects of drug abuse except………….
        A) Sickness   B) Death   C) **Depressio**n   D) Peace
ii)   When the body gets used to certain drug and you feel forced to want to use it
        always, it is called…………………
        A) Addiction   B) Attraction   C) Submission   D) Condition
iii)   The followings are the ways to prevent drug abuse except………………
        A) Using our medications the way doctor prescribed it.
        B) Buying our drugs from registered pharmaceutical stores
        C) Not taking medications at all
         D) Avoiding bad friends that can force us to take hard drug.

MODULE 2

SAFETY AND SECURITY

Table of Contents

Introduction

UNIT 1: Safety and Security

UNIT 2: Insecurity, Effects and Solutions

Introduction

Safety and security of life and property of people is important for national development. Insecurity has negative effects on our well being. It can lead to poverty, illness, and even death. The effects of insecurity on the economy of a nation include: destruction of properties and equipments, destruction of businesses etc. Government and the citizens must work together to ensure safety and security in any society. It will lead to peace and development. This module shall give us an understanding of the meaning of safety and security, insecurity, effect of insecurity on the people and economy, and ways of solving the problem of insecurity.

This module contains two units as follow

UNIT 1: Safety and Security

UNIT 2:   Insecurity, Effects and Solutions.

UNIT 1: Safety and Security

Objectives:

At the end of this unit, you should be able to:

- Explain the meaning of safety and security
- Mention at least two ways people in a community can ensure safety and security
- Give the meaning of the highlighted words in the passage and use them in correct sentences

Kunle was coming from school on a Wednesday afternoon in company of his friends, Sola and Bayo. After they crossed the road, they saw smoke coming from an uncompleted building nearby. They also heard some noise coming from the building. Kunle told his friends that they should check the building together.

Sola agreed but Bayo did not. He was very afraid. He told Kunle and Bayo not to put their lives in **danger**. It is the duty of the police to **ensure** the safety of our community. But Sola disagreed with Bayo. He told Bayo that safety means **protecting** ourselves and our environment from danger. Good **citizens** must **recognize** danger when they see one.

Bayo **scratched** his head. He was not convinced. He asked Kunle again why they should be **responsible** for protecting themselves and others. "The police cannot be everywhere," Kunle said. Therefore, we must do our part by being vigilant and observant of things that happen around us. It is not our duty to face bad people but it is our duty to report them to the police.

Bayo was happy to protect his environment. They went carefully toward the uncompleted building. There were some men there. They were planning to **kidnap** a chief in the community. Kunle took out his phone to video and record their **conversation.** They went to the police station and report to the police what they had discovered. That day, all the kidnappers were **arrested** by the police.

Learning Points

- Security is about **protecting** ourselves, our properties and our environment from **dange**r.
- Bayo was very afraid because he did not want to risk his life.
- It is not our duty to face bad people but we can report them to the police.
- Uncleared bushes and uncompleted buildings can be a hideout for criminals which can expose us to **danger**.
- We can save ourselves and others by reporting a **danger.**

Activities

Using either security or insecurity, fill the empty boxes below with the correct explanation of the words in the opposite boxes

Arrested	

Vigilant	

Kidnap	

Danger	

Crime	

Tasks

i)   It is the duty of the police alone to ensure the safety of our community. True or False?

ii)   Safety means **protecting** ourselves and our environment from danger. True or False?

iii)   One of the ways we can ensure safety in our environment is by being vigilant and observant of things that happen around us. True or False

UNIT 2: Insecurity, Effects and Solutions

Objectives:

At the end of this unit, you should be able to:

- Define insecurity
- Mention three effects of insecurity on the people
- Mention at least three effects of insecurity on the economic life of people
- List two causes of insecurity
- Give the meaning of the highlighted words in the passage and use them in correct sentences

The next day, the police chief in the community called a meeting. He told the people all that the young **heroes** did to protect their environment. He explained that the bush and uncompleted building was the **hideout** for the criminals, and could **expose** them to danger. Everyone must be ready and **alert** to protect their environment by reporting cases of possible danger. By doing this, you will save yourself and others. "Police is your friend", he said.

"The opposite of security is insecurity". This means that a person, community or country is in danger. Insecurity can cause fear, loss of life and properties and lack of trust. It can also **endanger** the economic life of a nation. Where there is **cultism**, **rape, armed robbery, kidnapping, and terrorism**, there is insecurity. Domestic accidents, drug abuse, and **illiteracy** constitute danger to personal safety and security.

Many countries today have the problem of insecurity. This happens sometimes because government is careless. **Corruption, unemployment** and **neglect** are major causes of insecurity. Many people kidnap and steal to feed their family. Some people joined cults because they want to live a good life. Most kidnappers in the country today are youths because there is no job to earn a living and keep them busy.
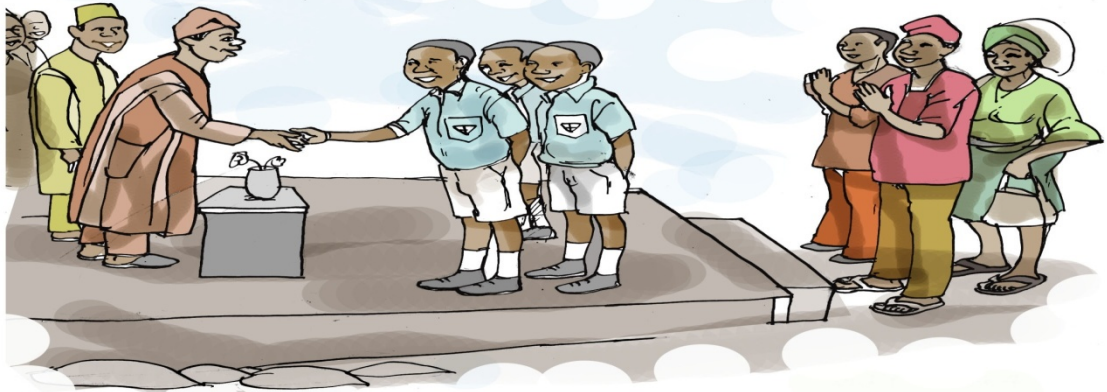
Government can make the society secured by providing basic needs like shelter, clothing, food and security outfits. Education should be made free so that people will know and do what is right. The youth should be employed so that they will be focused. It is the duty of the government to protect her citizens. Good citizens too, should also do their part to be safe. After the police left, Kunle, Sola and Bayo were **celebrated** in their community.

Learning Points

- Insecurity means that a person or country is in danger.
- Insecurity can lead to fear, loss of life and properties and lack of trust.
- Causes of insecurity include: and **corruption, unemployment** and **neglects.**
- **Cultism, rape, armed robbery**, **kidnapping, and terrorism** are effects of insecurity on the economic life of a nation

Activities

Complete the crossword puzzle on safety and security: insecurity, safety, hideout, police and government
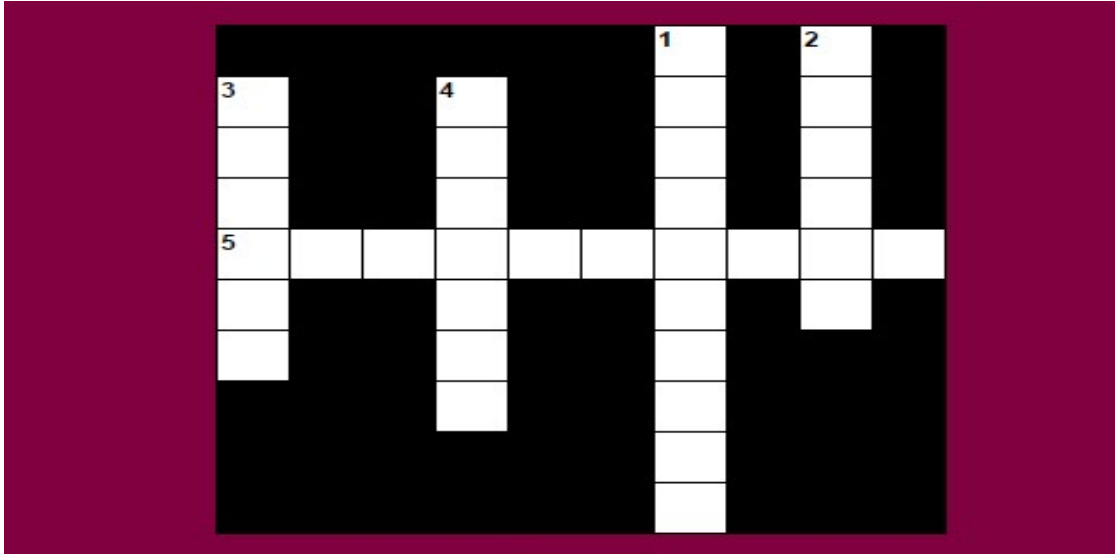
Tasks : Fill in the gaps with the correct options from A-D

i) When a person, or community or a country is in danger it is called……………
   A) Security
   B) Insecurity
   C) Education
   D) Environment

ii) Bushes and uncompleted buildings around us can be hideouts for criminals and can expose us to …………………..
   A) Peace
   B) Security
   C) Danger
   D) Police

iii) Neglects, unemployment and corruption are causes of …………………………
   A) Security
   B) Insecurity
   C) Education
   D) Environment

iv) The following are ways of solving the problem of insecurity except……………..
   A) Provision of basic needs of shelter, clothing, food and security outfits.
   B) Provision of employment, especially for youths3
   C) The development of the country should be equal
   D) Not reporting possible cases of danger

MODULE 3

HEALTHY LIVING

Table of Contents

Introduction

Introduction

Our health is our wealth. A healthy lifestyle makes possible a happy and long life without sickness. A healthy lifestyle includes taking care of our body such as our hair, teeth, eyes among others, eating good food, wearing clean cloths and taking good care of our environment. We should practice a healthy lifestyle all the time. There are many benefits of a healthy lifestyle. Healthy lifestyle can be divided into two: (1) an active life through physical exercises and (2) eating good food and eating well. Regular exercise reliefs us of pains, makes us active and happy. It improves our self confidence and keeps us physically and mentally alert. When we eat good food, we grow well and strong. It also keeps us from sicknesses, diseases and from wasteful spending. This module shall give us understanding of what healthy living is, and how we can live healthy. We shall also know the various benefits of a healthy living

This module contains two units that will help you to understand the followings:

UNIT 1: Importance of Healthy living

UNIT 2: How to Live Healthy

UNIT 1: Importance of Healthy Living

Objectives:

At the end of this unit, you should be able to:

- List at least three diseases that can harm the body
- Mention at least two things we can do to live healthy
- Explain what we can do when after practicing healthy living we still become sick
- Give the meaning of the highlighted words in the passage and use them in correct sentences
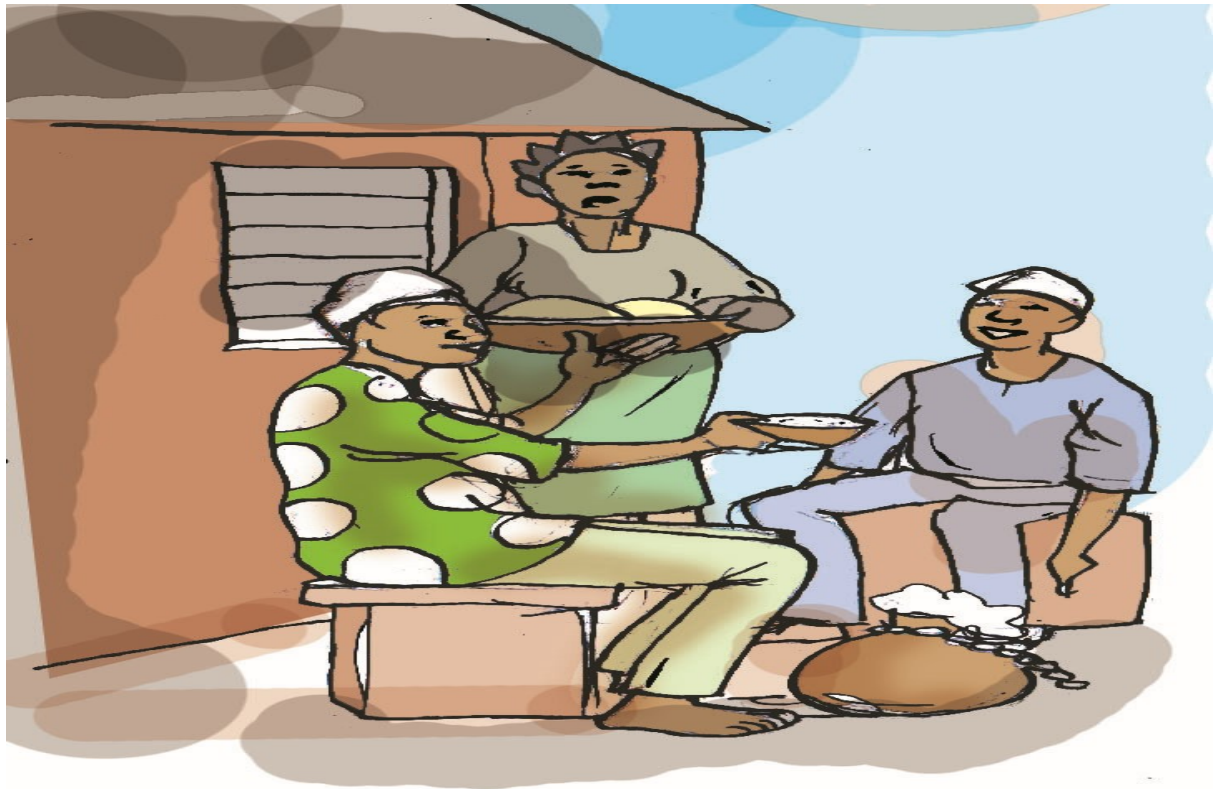
Mr. Ajayi is a strong farmer who enjoys taking palm wine after the day's work. He loves palm wine so much that sometimes he forgets to eat. Mr. Ajayi's wife always complains that he does not eat her food.

One day Mr. Ajayi became so sick that it worried his family and friends. He was known to be strong, hardworking and rarely falls sick. Mrs. Ajayi and the neighbours took him to the hospital. The doctor examined Mr. Ajayi. After the **examination**, Mrs. Ajayi and the neighbours asked the doctor why Mr. Ajayi became sick.

The doctor told them that Mr. Ajayi has been **diagnosed** to have ulcer and diabetes. "This is why he became sick", he said. The doctor explained that there are not enough **nutrients** and **vitamins** in his body. The body needs vitamins and nutrients to fight **germs** which cause **diseases** and **infections**. He also said that the only way to be free from diseases and infections is to live healthy. There are many kinds of diseases which can harm the body. They include: ulcer, cholera, diabetes, ebola, cancer, malaria, and diarrhea.

To live healthy, we must eat well, drink plenty of water, take fresh fruits daily, keep our environments clean and do exercises. We should also get **immunization** and wash our hands regularly everyday with soap or ashes and clean water. Healthy living keeps us from pain. It helps us to save money and also makes us to live long.
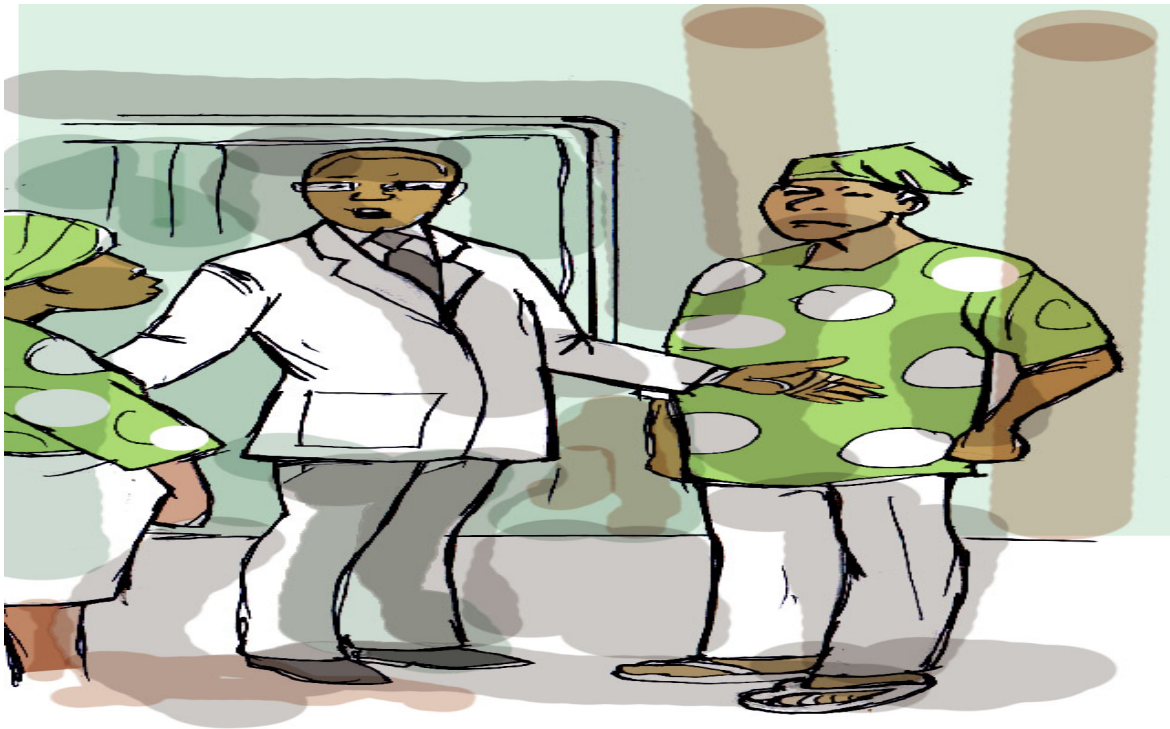
Before Mr. Ajayi was discharged from the hospital, the doctor advised him and his wife that whenever they become sick after practicing a healthy lifestyle, they should visit a good hospital. "A test will be carried out on you to know the cause of your sickness. Drugs and injections will be given to cure the sickness. Do not take medicine without a doctor's advice. It is called drug abuse. It can lead to death or cause a more serious damage to the body", he said.

Learning Points

- Lack of enough **nutrients** and **vitamins** in the body can make the body sick.
- To live healthy we must eat well, drink plenty of water, do exercises and wash our hands regularly with soap or ashes and clean water.
- Healthy living keeps us from pain, helps us to save money and also makes us to live long.

Activities

Tick correctly in the columns, using '#' where you agree and 'x' where you disagree

	Disease	Healthy living	Infection	Long life
WORDS				
Exercise				
Diarrhea				
Immunization				
Ebola				
Hygiene				
Malaria				

Tasks

Fill in the blank spaces with the correct options from A-D

i)   Nutrients and vitamins are needed in the body to fight…………
       A) **Germs**   B) Blood   C) Water D) Food
ii)   Ebola, Cholera and Malaria are examples of …………………..
       A)   Fruits   B) Exercise   C) Healthy living   D) **Disease**
iii)   Healthy living does the followings except ……………………………..
       A) Keeps us from pain.
       B) Keeps us from growing well
       C) It helps us to save money
       D)   Makes us to live long.
iv)   Immunization, Exercises and Hygiene indicate …………..
       A)   Fruits   B) **Infection**   C) Healthy living   D) **Disease**

**UNIT 2:   How to Live Healthy**

Objectives:

At the end of this unit, you should be able to:

- List at least two benefits of eating good food
- Mention at least three benefits of exercise to the body
- Give the meaning of the highlighted words in the passage and use them in correct sentences

A month later, Mr. Ajayi and his friends were invited to a lecture on care of the body. At the **seminar**, Mr. Ajayi and his friends were advised to eat good food always. "We know the **importance** of food when we are hungry. This is because we will not be able to do anything without it. Food gives us energy to work and play. When we eat we grow well. When we don't, the body will not be able to grow well," the doctor explained.
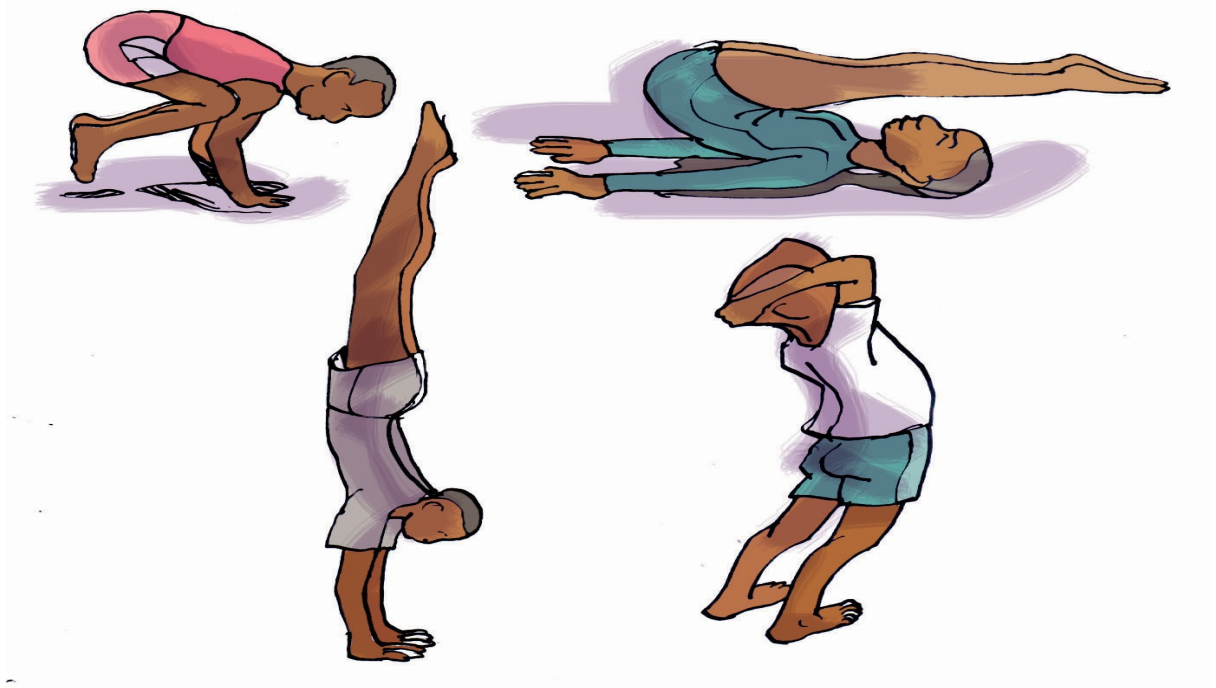
"As important as food is, exercise is also good for the body. We can exercise the body by jumping, skipping a rope, walking, stretching, jogging, climbing, swimming and so on. This will make our muscles **develop**, relief us from pain and makes us to be strong. If we don't do exercise the body will become weak.

We can also do things that make us happy apart from our work and play. This will exercise the mind and brain. It is called **hobbies**. A person can have more than one hobby. It can be travelling, reading or singing.

After play and work, the body needs to rest. We can rest our body by **relaxing** on a stretcher or lying on the bed. When we rest our body it gets new strength to **function"**, the doctor said. After the seminar, Mr. Ajayi thanked the doctor and his friends for the lecture and promised to turn a new leaf. "I will start to eat well," he said.

Learning Points

- Food is very important for the body to grow well and to help us be strong.
- Exercises like jumping; skipping, walking, jogging and swimming can help the body to be healthy.
- **Hobbies** and rest can make us to be healthy.

Activities

Fill in the boxes with examples of exercise
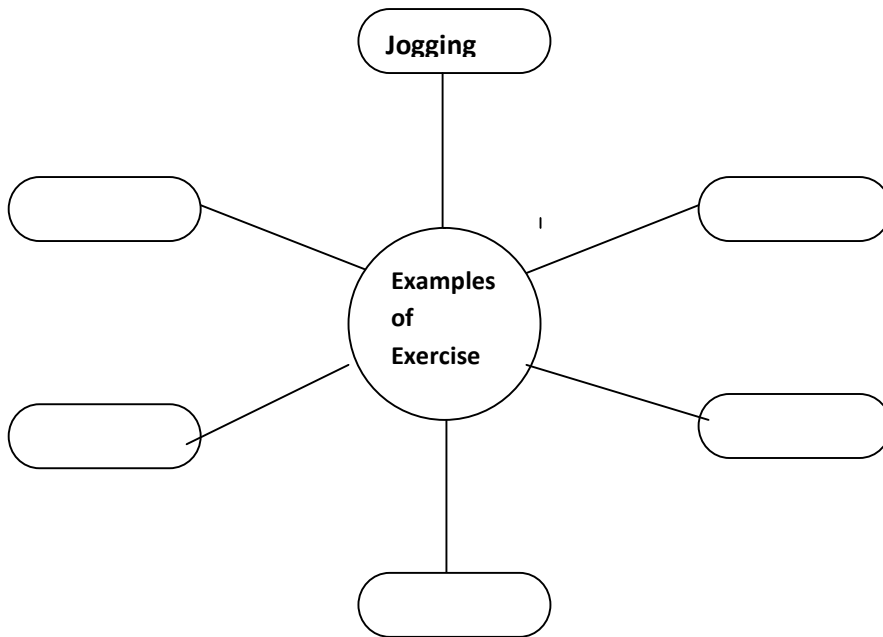
Tasks

Choose the right option from A-D, that best answer the questions

i)   The **importance** of food to the body includes ……………….
        A) Giving the body energy to be strong
        B) Growing well
        C) Making the body to be weak
        D) Giving the body nutrients that fights germs
ii)   Jogging, walking and skipping are examples of………………..
        A) Nutrients
        B) Exercise
        C) Food
        D) Sleep
iii)   Reading and travelling are examples of-------------------------
        A) Hobbies
        B) Nutrients
        C) Food
        D) Vitamins
iv)   Our body needs ……………….after work or play
        A) Exercise
        B) Jogging
        C) Hobbies
        D) Rest

MODULE 4

PARENTING

Table of Contents

Introduction

Introduction

Parenting means raising children by father and mother or by guardians. There are good and bad parenting. Parenting involves loving, caring, encouraging and teaching children proper spiritual, moral and cultural values. These will give them confidence and ability to function as normal and successful adults in their societies. In this module we shall be considering types of parenting, features of parenting and the effects of bad parenting.

This module contains two units as follow.

UNIT 1: Parenting

UNIT 2: Parenting and the Effect of Bad Parenting

UNIT 1: Parenting

Objectives:

At the end of this unit, you should be able to:

- Give at least two reasons Damilola and her sister were separated from their parents
- Explain why school became difficult for Damilola
- Explain why Damilola thought about her parents
- Give the meaning of the highlighted words in the passage and use them in correct sentences

 "Today is a good day to see the town", Damilola thought to herself. She got up and **tiptoed** to the door. "My grandma must be sleeping". Suddenly, her grandma **screamed** "come back here, you rat". Damilola felt sad. Life could have been different if her father and mother had stayed together.

The next day at school, Mr. Damife show the class a picture of a father, mother and their children. They were eating and talking with happy faces. On her way home, Damilola thought about what had happened in her family before she came to live with her grandma. Her mother is a business woman who came home very late in the night. Her father, Mr. Komolafe, is an engineer in Portharcourt. He only came home at festive periods. Damilola and her sister were left in the care of a **nanny.**

Two years ago, her mother packed out of the house because her father married another woman in far away Portharcourt. Now, Damilola has been separated from her sister who is living with their uncle in Sagamu. She has not seen her since then. Her father came home once on a Christmas day, but her mother never came back.

School is difficult because she cannot pay **attention** in class. She cannot do her class work because she is thinking about the social studies lesson. Mr. Damife had said that "a home is a place where children and adults live. Parents should live with each other. They should **enjoy** and love one another. In every home, the children and their needs should always come first". Do her parents know all of these? She remembers the picture in her class, and cries again.

Learning Points

- Damilola was separated from her parents because they never had time for her.
- Learning in school was difficult for her because she could not concentrate
- She felt neglected and always long for a happy home

Activities

- Write down five effects of neglect by parents on some children you have noticed around you.
- Use the glossary to find out the meaning of the following words and use them in correct sentences:
Tiptoed
Scream
Nanny
Enjoy

Task

Fill in the blank spaces with the correct options from A-D

i) Damilola was separated from her parents and now live with……………
   A) Her uncle
   B) Her sister
   C) Her parent
   D) Her grandma

ii) Damiloa's parents…………… their children
   A) Respected
   B) Neglected
   C) Loved
   D) Cherished

iii) The social studies lesson showed Damilola the followings, except…………….
   A) Happy family
   B) Nuclear family
   C) Extended family
   D) Bad family

UNIT 2: Parenting and the Effect of Bad Parenting

Objectives:

At the end of this unit, you should be able to:

- Mention two types of family
- Describe what parenting is
- Give at least three effect of bad parenting
- Give the meaning of the highlighted words in the passage and use them in correct sentences

A family can be two or more persons living in the same house. There are different types of family. When the family is made up of the father, mother and their children, it is called a nuclear family. When the family includes others like uncles, aunts, cousins, nephews and grandparents, it is called an extended family.

In every family, it is expected that the father and mother raise their children well by loving them, caring for them, encouraging and **equipping** them with proper spiritual, moral and cultural values. These will build in them **capabilities** that will help them to be normal and successful adults in their societies.

Parents must also provide food, clothing, and shelter for their children. They must be ready to sacrifice their comfort to educate them. This is called good parenting. Parents, however, must not over-protect their children or **indulge** them. Bad parenting can cause loneliness, low self esteem, and **maladjustment**, exposure to **violence**, crime and abuse, and lack of trust.

Parenting is a relationship between parents and their children. While parents guard, children must always obey their parents, be **polite** and respectful. Children must accept and perform

responsibilities given to them. No one can live alone in the society. Parents need each other and their children. Children also need their parents to **survive.**

Learning Points

- A family can be nuclear or extended.
- Good parenting means raising children well by loving, caring, encouraging and equipping them with proper spiritual, moral and cultural values. These will build in them confidence and capabilities to help them function as successful adults in their societies.
- Effects of bad parenting include: loneliness, low self esteem, and maladjustment, exposure to violence, crime and abuse, and lack of trust.

Activities

Match the words in the circles correctly, as shown by the given example.
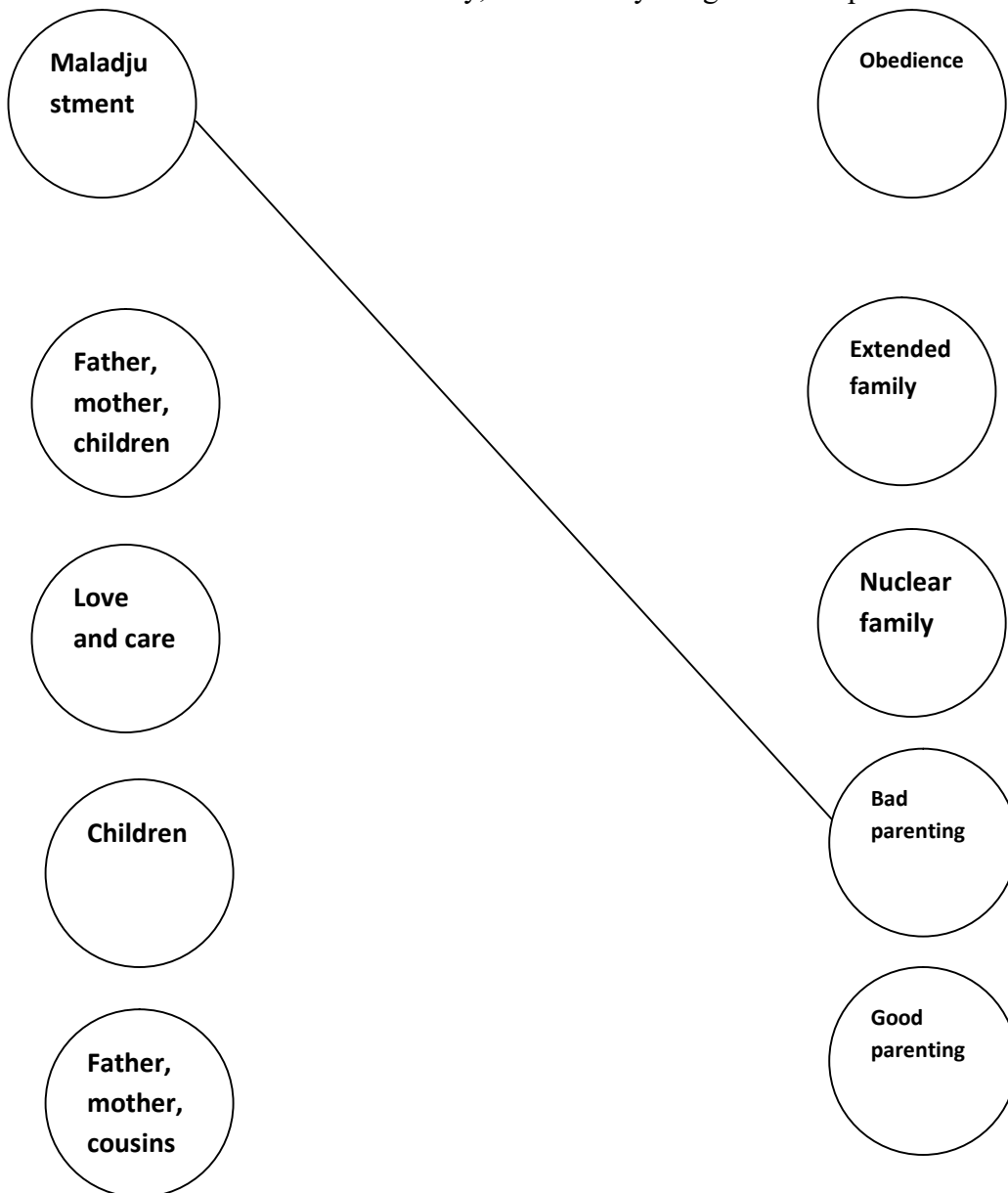
Task

Fill in the gaps with the correct options from A-D

i)   ………………….consists of father, mother, cousins, uncle
A) Nuclear family
B) Extended family
C) Bad parenting
D) Good parenting

ii)   When parents raise their children by loving, caring, encouraging and equipping them with proper spiritual, moral and cultural values, it is called……………………..

iii)   A) Nuclear family
B) Extended family
C) Bad parenting
D) Good parenting

iv)   The following are the effects of bad parenting except……………….

A) Loneliness
B) Love
C) Maladjustment
D) Exposure to crime

iv)   In parenting, children are expected to play the following parts except…………………
A) Be criminal
B) Be **polite**
C) Be obedient
D) Be respectful

MODULE 5

VOTING RIGHTS

Table of Contents

Introduction

UNIT 1: Importance of Voting Rights

UNIT 2: Election and Voting

Introduction

Voting rights is an important part of democracy. It is a fundamental right of every citizen of a country. It is also the opportunity of every citizen to have a say in how their society is governed and who governs it. Voting is a powerful form of expression. It gives people the ability to express their opinions about the government, to change what they do not like and bring about something they like. Every vote builds democracy and makes it stronger. From this module we shall be learning why voting right is important and what is expected of us as citizens during elections.

This module contains two units as follow.

UNIT 1: Importance of Voting Rights

UNIT 2: Election and Voting

UNIT 1: Importance of Voting Rights

Objectives:

At the end of this unit, you should be able to:

- Explain the importance of voting rights
- Describe who can vote
- Explain why people are discouraged from voting
- Give the meaning of the highlighted words in the passage and use them in correct sentences
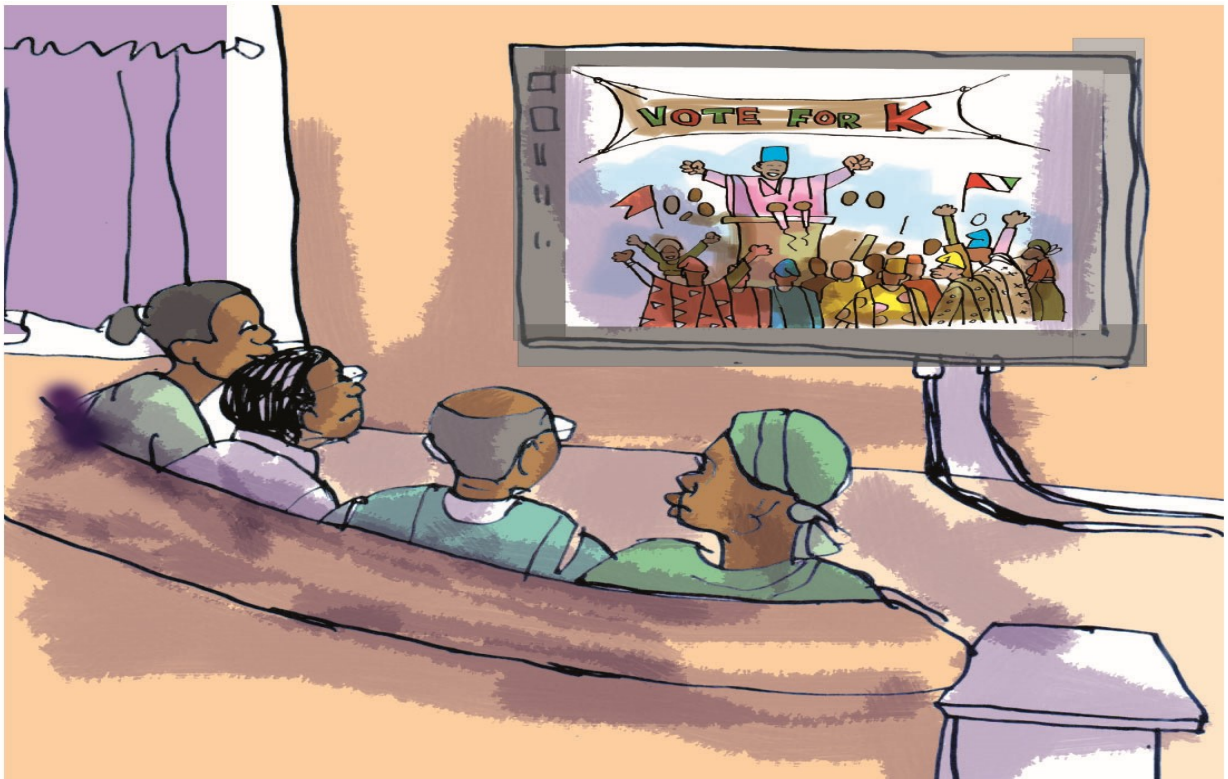
Mr. Olorunfemi is a typist. He works for the government at the ministry of education. One afternoon, he was watching television with his wife and mother. On the T.V, governor Adelaja was **campaigning** that people should vote for him again. He was making many promises.

"Never", Mr. Olorunfemi said. "Thank God your **tenure** is almost over. We will be able to vote the people we want". Grandma Olorunfemi asked his son why that is important to him. "Maami, as citizens of this country we have the **rights** to vote. We can also ask people to

vote for us. When a person is 18 years old and above such a person can vote". Grandma Olorunfemi replied "I understand you my son but I have never voted for anyone before".
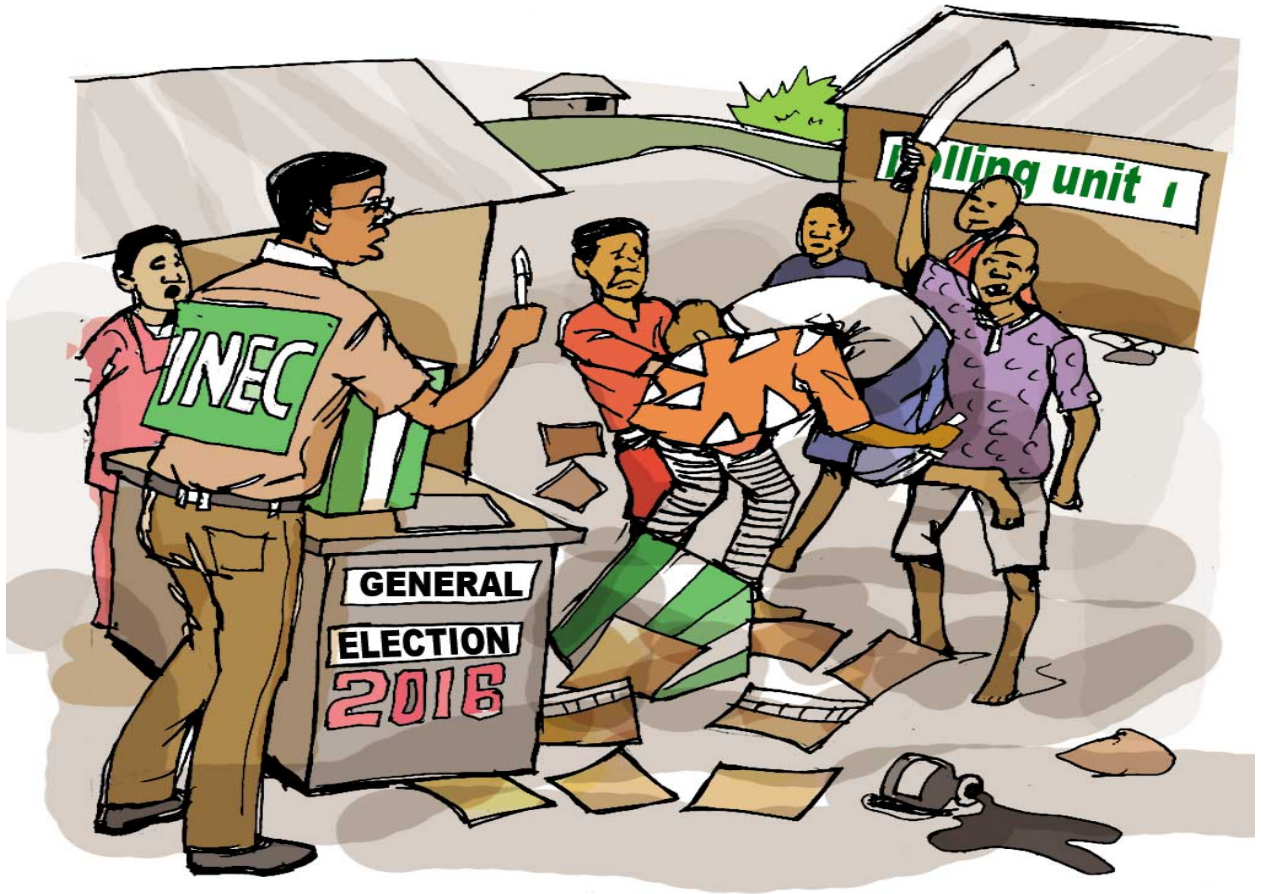
"Maami, I'm surprised" Mr. Olorunfemi said. "How do we get what we want if we don't vote?" "It is not our **fault**" Grandma said. "We hear of fights in the city and how they kill our youths. Nobody wants to lose their children. That is why we agreed not to allow ourselves and our children to vote".

"What you have done is wrong, Maami", Mr. Olorunfemi said. "The entire village has denied themselves of their voting right. It is our right to vote and be voted for. This is why we must not allow fight and **shedding** of blood during election. We must also say no to the people that come with money to bribe us. When you collect money to vote for someone you have sold your rights."

Grandma Olorunfemi was not happy. "No one has come to the village to tell us this" she said. Don't worry, Maami. The government is working on that already. When you get to the village you can also tell everyone what you have learnt."

Learning Points

- Everyone has a right to vote and be voted for
- Only people that are 18 years and above can register to vote.
- Fighting and **shedding** of blood should not be allowed during election.
- When we collect money to vote we have sold our **rights**.

Activities

Use the dictionary to give two other words in the empty boxes that have the same meaning as the one in the boxes.

Campaign

Tenure

Rights

Fault
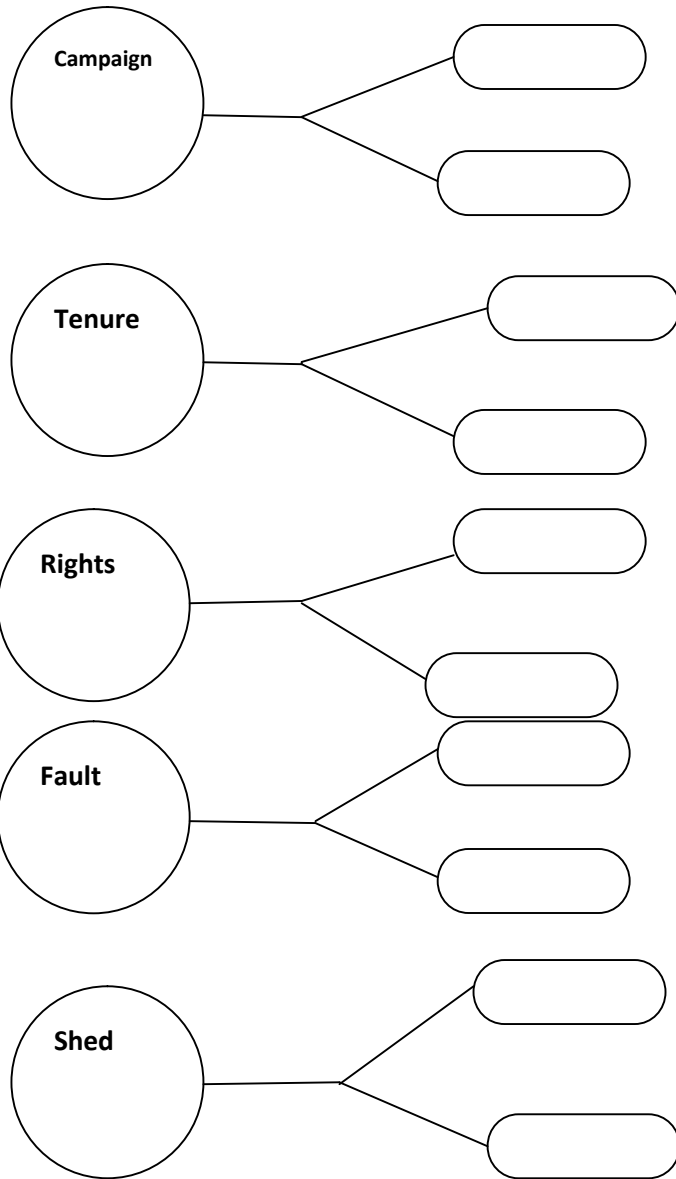
Shed

Tasks

i) Voting rights helps people to change what they don't want and bring about what they want. True or False

ii) Fighting and blood shedding encourage people to vote in an election. True or False

iii) When we collect money in an election to vote for people we are selling our rights. True or False

iv) When we don't vote we deny ourselves of our voting rights. True or False

UNIT 2: Election and Voting

Objectives:

At the end of this unit, you should be able to:

- Describe a democratic society
- Mention at least two importance of voting rights
- Explain how a person can participate in an election
- Give the meaning of the highlighted words in the passage and use them in correct sentences

Election can only take place in a democratic society. This is a type of society where the people are the ones who chose the people that lead them. This means the people also have a say in the way their society is governed. People that want to represent their various communities in an election are called candidates.

Each candidate has their own communities where they can be voted for. This is called a constituency. A candidate from Lagos cannot be voted for in Ogun state. The only person that can be voted for throughout the country is the president.

There are many political parties in Nigeria. They have their plans and what they will do if they win an election. This is called manifestos. A person must belong to a political party before he or she can **contest** in an election.

The people that can vote or take part in an election are called electorates. Long before the start of election, people who are above 18 years will register their names and voters cards will be given to them. This is the only way to **participate** in an election.

Voting is a powerful form of expression. It gives people the ability to **express** their **opinions** about the government, to change what they don't like and bring about something they like. Every vote **builds** democracy and makes it stronger.

Learning Points

- Election can only occur in a democratic society.
- The people that want to represent their various communities in an election are called candidates.
- What a party will do after winning an election is called manifestoes.
- Voting right gives people the ability to express their opinions about the government, to change what they don't like and bring about something they like.

Activities

Complete the crossword puzzle below on electoral activities: manifestoes, electorates, candidates, democratic, constituency, president, voting rights.
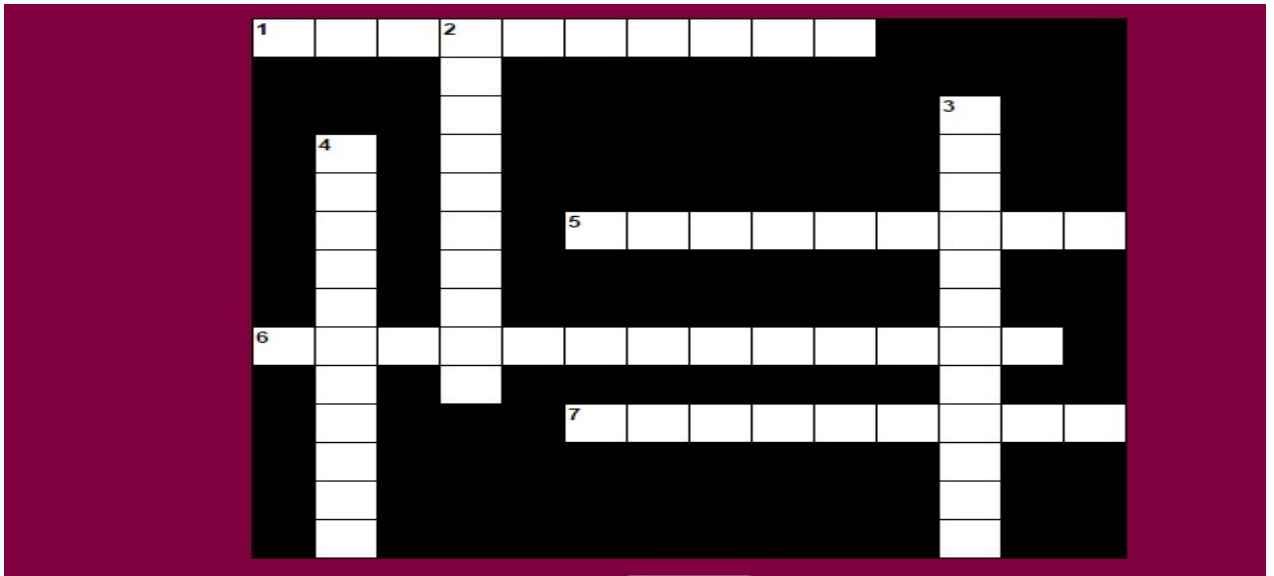
Tasks

Fill in the gaps with the correct options from A-D

i)   ………………. can only take place in a democratic society
   A) Government
   B) Manifestos
   C) Constituency
   D) Election

ii)   The plan of what a party would do after winning an election is called………………..
   A) Government
   B) Manifestos
   C) Constituency
   D) Election

iii)   People that want to represent their various communities in an election are called……………
   A) Candidates
   B) Constituency
   C) Communities
   D) Country

iv)   ………………… is a powerful form of expression
   A) Electorates
   B) Voting rights
   C) Participants
   D) Election

MODULE 6

FARMING

Table of Contents

Introduction

Introduction

For several years, farming has been associated mainly with the production of food crops and raw materials. But today, farming includes: fish farming, fruit and trees cultivation, poultry and bee keeping etc. Farming plays very important roles in the economy of a country. In addition to providing food and raw material for industries, farming also provides employment opportunities and a mean of livelihood for lots of people. It contributes a great deal to the national income, and improves standard of living. This module shall help us to understand what farming is, types of farming and the importance of farming.

This module is divided into two units as follow:

.UNIT 1: Farming

UNIT 2: Types and importance of farming

UNIT 1: Farming

Objectives:

At the end of this unit, you should be able to:

- Give two reasons why Adamu did not want to be a farmer
- Mention one major thing that might happen if everybody decides to work in the office
- Give the meaning of the highlighted words in the passage and use them in correct sentences

Once upon a time, there was a man named Adamu who lived in a little village called Kwali. Adamu lived with his uncle, Musa. Uncle Musa was a farmer who owned acres of land. Every morning when he woke, uncle Musa would work on his farm. Adamu was **expected** to help his uncle on the farm but he was a lazy boy.

Every day when uncle Musa left for farm, Adamu would remain in the house sleeping. His uncle was never happy with this. Adamu told uncle Musa that farming is not good and that he would like to work in an office. He wanted a job that has nothing to do with farming.
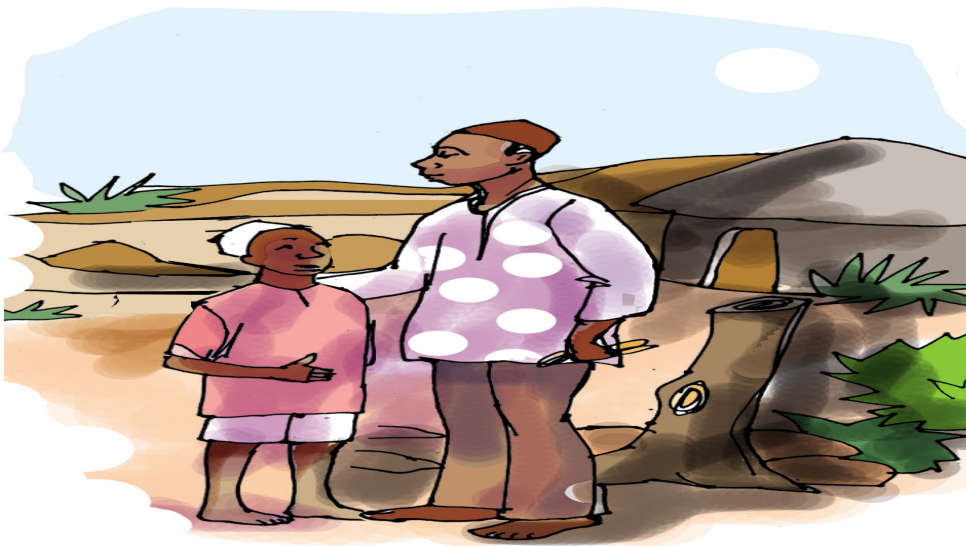
One day, while leaving for the farm uncle Musa told his wife not to cook any food for Adamu. When Adamu woke up that morning, he found no food on the table to eat. When he got to the farm, he **complained** to his uncle. He asked him why there was no food.

Uncle Musa replied, "because you are lazy and do not want to work on the farm". "Why should I work on the farm?" Adamu asked. "I want to work in a big office." Uncle Musa explained to him that if everyone should work in the office, there might be **shortage** of food **supply** which might lead to hunger and **famine**.

"Farming is very important for the survival of any country" uncle Musa emphasized. Most of the **products** we use come from farming. That is why we need farmers to farm. Farming should be encouraged. You can earn a living from farming and also **contribute** to the **economic growth** of the country, if you are hard working," he concluded.

Learning Point

- Every nation needs farming to survive
- Most products we use come from farming
- There might be shortage of food supply if everybody works in the office
- We can earn a living from farming and also contribute to the economic growth of the country

Activities

Use the glossary to give another word in the empty boxes that have the same meaning as the words in the boxes below.

Expect

Complain

Famine

Contribute
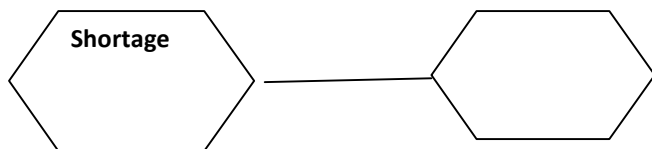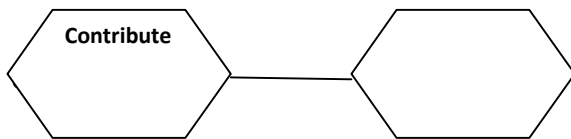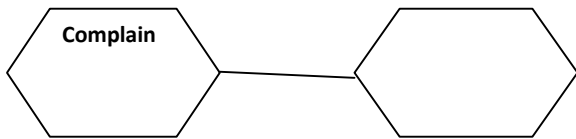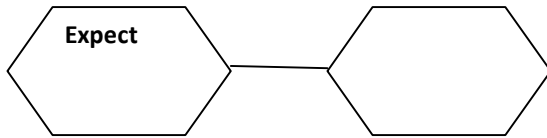
Shortage

Tasks

1) There might be **shortage** of food **supply** which might lead to hunger and **famine**, if everyone decides to work in the office. True or False?
2) Farming contributes to the **economic growth** of a country. True or False?
3) **Farming is very important for the survival of any country. True or False?**

UNIT 2: Types and importance of farming

Objectives:

At the end of this unit, you should be able to:

- Mention two types of farming
- Give at least three importance of farming
- Give the meaning of the highlighted words in the passage and use them in correct sentences
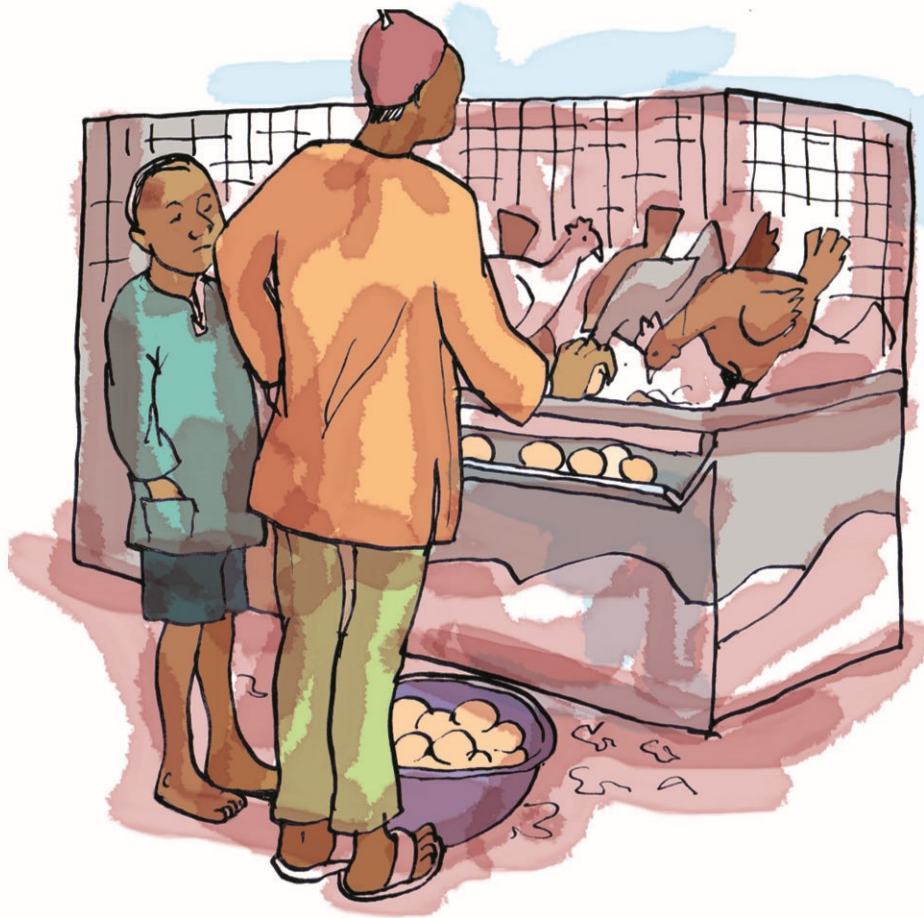

As Adamu listened, uncle Musa picked the eggs from the poultry cage. "Uncle, please tell me about farming" he said. "Farming **involves** planting and rearing of animals" uncle Musa began. "It started a long time ago. It is almost as old as man. The pe ople who plant and **rea**r animals like me are called farmers."
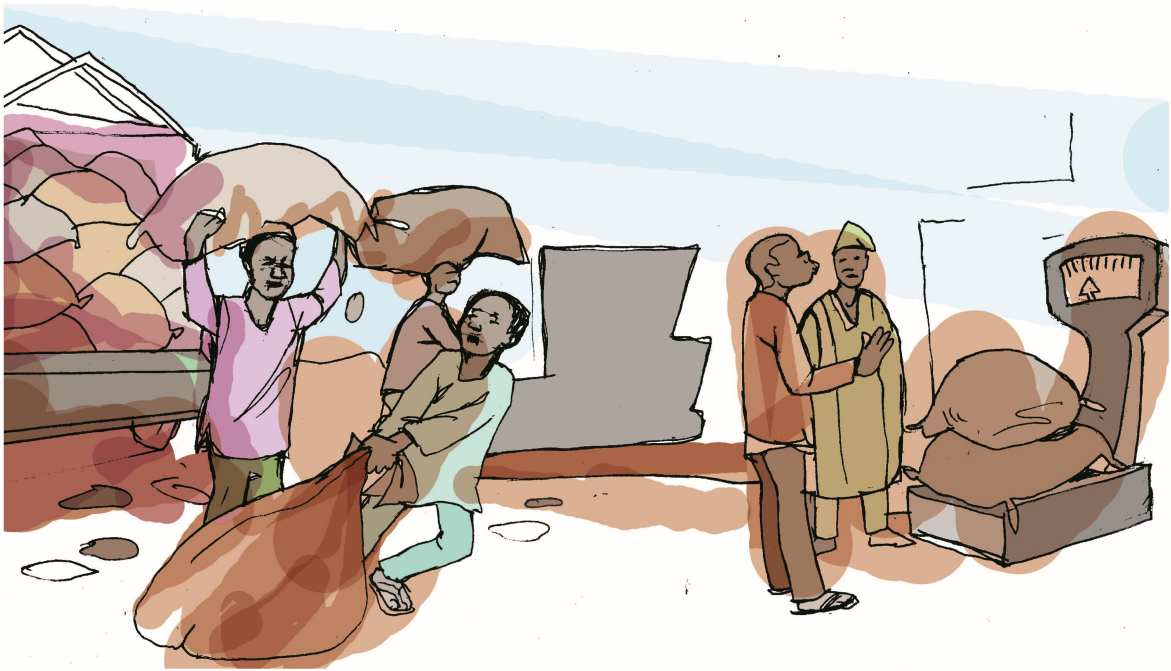
"In the olden days, people only carry out farming to provide for their own family. This is called subsistence farming. Now, people can farm to provide for themselves and others. This type of farming is called commercial farming. People **engage** in this type of farming on a **large scale** to make profit. Farmers also provide **raw materials** for the economic growth of the country. They also **create** job for others," he continued.

"Many young people like you want to leave the village to stay in the city. They believe that farming is difficult and the profit is not enough. This happens because farmers are not considered important in the society. Despite their hard work people treats them as poor people in the society. This is why we must help farming to grow in Nigeria".
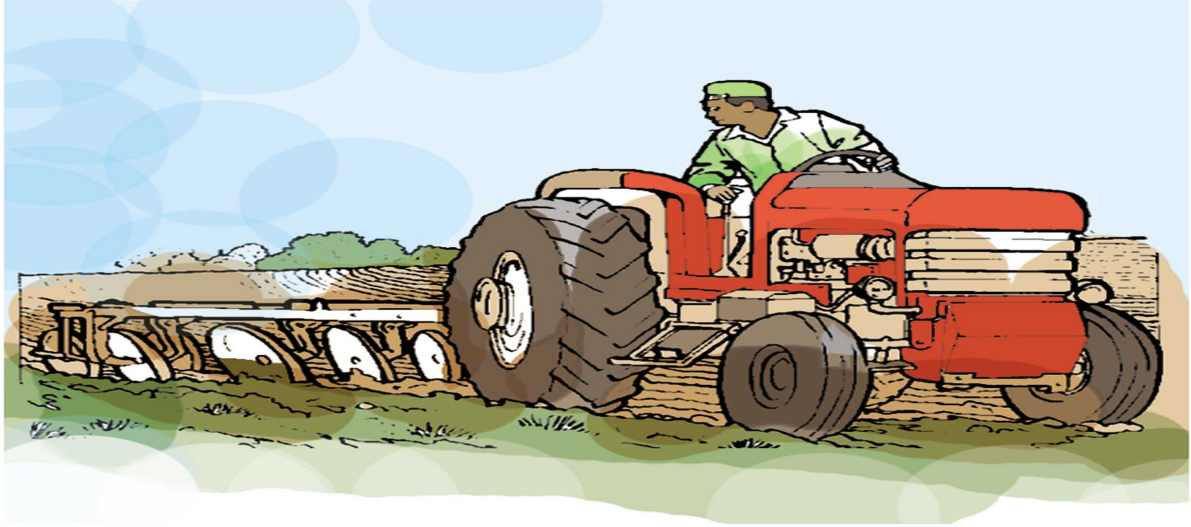
"Government should provide modern **equipment** like tractors, harvesters, ploughs, planters, and many others. This will make it easy for farmers to provide enough food for everyone. Just like education and security, farming in Nigeria should be **monitored** and **managed** well. Education and security without food is meaningless", uncle Musa concluded, "Now I understand" said Adamu. "One day, I will be a commercial farmer."

Learning Points

- Farming involves planting and rearing of animals.
- Those who plant and **rear** animals are called farmers.
- When people carry out farming to provide for themselves, it is called subsistence farming.
- Those that farm on a **large scale** to make profit are commercial farmers
- Government must contribute to farming in Nigeria by providing modern farming **equipment** like tractors and harvesters.

Activities

Give at least seven examples of farming equipment used in the olden days and three modern day farming equipment apart from the on es mentioned in this passage.

Tasks

1) The type of farming people do to provide for their own family is called subsistence farming. True or False?
2) By providing modern farming **equipment**, it would help farmers to provide enough food for the nation. True or False?
3) Farming involves planting of plants alone. True or False?
4) People who plant and rear animals are called farmers. True or False?

GLOSSARY

Module 1

Unit 1

Words
Meanings

Drug abuse	wrong way of using drugs
Highlighted	**a)** to mark or cause something to stand out **b)** to center attention on something
Approach	**a)** to come near **b)** move towards
Medications	a substance used in treating disease or something that affects well-being
Sickness	unsound condition or an unhealthy condition of body or mind
Prescribed	**a)** to direct the use of something as a remedy **b)** to lay down a rule of action
Instructions	**a)** an outline to be followed **b)** order intended as a general rule of action
Confused	**a)** to make unclear **b)** to cause to be embarrassed or upset
Cure	**a)** to heal a disease **b**) to correct bad situation
Harm	**a)** an act that damages or hurts **b)** to inflict with physical pain

Unit 2

Depression	**a)** a state of feeling sad or lowness of spirits
Loneliness	**a)** having no company **b)** not visited by people
Low self esteem	not having confidence and satisfaction in oneself
High blood pressure	when the pressure of the blood on the walls of blood vessels is above the usual level
Hope	**a)** to desire something and expect that it will happen **b)** to expect something with confidence

160

Pharmaceutical	involved in the manufacture and sale of medications
Approved	**a)** to think well of something **b)** to accept something as satisfactory
Educate	**a)** to develop the mind and morals especially by instruction **b**) to form by instruction, discipline or drill

Module 2

Unit 1

Safety	**a)** freedom from hurt, injury, or loss **b)** condition of being safe
Security	**a)** measures taken to guard against destructive actions **b)** the state of being secure
Insecurity	**a)** not well protected **b)** not confident or sure
Effect	when something has the power to alter or bring about a change
Solutions	**a)** answers to a problem **b)** a process of solving a problem
Danger	**a)** the state of not being protected from injury, harm, or evil **b)** something that may cause injury or harm
Ensure	**a)** to make sure, certain, or safe **b)** to assert with confidence
Protecting	to cover or shield from something that can destroy or injure
Citizens	**a)** people who live in a city or town **b)** members of a state
Recognize	**a)** to know and remember upon seeing **b)** to be willing to admit
Scratched	**a)** to rub oneself lightly especially to relieve itching **b)** to scrape, rub, with something like claws or nails
Responsible	**a)** having a duty to be in charge of something or someone **b)** to look after something or someone
Kidnap	to carry away a person by unlawful force or by fraud and against his or her will
Conversation	talking or a talk between two or more people
Arrested	**a)** to take or keep in one's control by authority of law **b)** the state of being stopped

Unit 2

Heroes	**a)** a person admired for doing something brave **b)** one that shows great courage
Hideout	a secret place where someone goes because they do not want anybody to see them
Expose	**a)** to leave without protection, or covering **b)** to make known
Alert	**a)** being watchful and ready to meet danger **b)** to be quick to understand and act
Endanger	to bring into danger or peril
Cultism	an extreme religious group that is not part of an established religion
Rape	**a)** to have sexual relations with somebody by force **b)** to take away by force
Armed robbery	the act, practice, or an instance of robbing with dangerous weapons
Kidnapping	to carry away a person by unlawful force or by fraud and against his or her will
Terrorism	the use of violence to achieve a goal or a demand
Illiteracy	inability to read or write or compute simple numeracy
Corruption behavior	**a)** a change from the original for the worse **b)** dishonest or evil
Unemployment	the state of being out of work
Neglect	**a)** to give little attention or respect to something or somebody **b)** to leave undone or attended to especially through carelessness
Celebrated	**a)** to praise or make known openly **b)** to observe in some special way

Module 3

Unit 1

Wasteful	**a)** something thrown away as worthless after being used **b)** of no further use to a person, animal, or plant

Examination	**a)** a test to determine progress, fitness, or knowledge **b)** the state of being examined
Diagnosed	to find out what is wrong with someone or something by examining them closely
Nutrients	a chemical or food that provides what is needed for plant, animal and human beings to live and grow
Vitamins	a natural substance found in food that is necessary for good health
Germs	a small mass of living substance like bacteria that has the ability to grow that causes disease
Diseases	an illness or unhealthy condition in one's body caused by infection
Infections	a disease caused by bacteria or virus that affects particular part of one's body
Immunization	treatment to produce bodily power to fight against diseases

Unit 2

Seminar	a meeting for giving and discussing information
Importance value	condition of something that makes people believe it to be of great
Develop	**a)** to go through a process of natural growth **b)** to bring to a more advanced state
Hobbies	an interest or activity to which a person devotes time for pleasure
Relaxing	**a)** to rest or enjoy oneself away from one's usual duties **b)** to get rid of nervous tension or anxiety
Function	**a)** the natural or proper action of the part of a body in a living thing **b)** to serve a certain purpose

Module 4

Unit 1

Tiptoed   to walk quietly and carefully on your toes

Screamed   to make loud high sharp sound, cry or noise

Nanny   a child's nurse or caregiver

Attention   an act of kindness, care, or courtesy

Enjoy   **a)** to take pleasure or satisfaction in something **b)** to have a good time

Unit 2

Equipping   to make ready or to furnish for action or service

Capabilities   **a)** having the qualities such as physical or mental power to do something **b)** to be able to do one's job well

Indulge   to let someone have or do what they want, even if it is bad

Maladjustment   unable to have good relationship with people because of problem in your character and attitudes

Violence   the use of physical force so as to injure or abuse

Polite   **a)** showing good training **b)** showing consideration and courtesy

Survive   to remain alive or to continue to function in spite of difficult situations and dangers

Module 5

Unit 1

Democracy   a system of government in which everyone is equal and has the right to vote and make decisions

Fundamental   forming a foundation or serving as a base

Expression   a mode or means of speaking to show mood or feeling

Campaigning	to enter in competition or a connected series of actions intended to bring about a particular result
Tenure	the act, right, manner, or term of holding position or something
Rights	**a)** the power or privilege to which one is justly entitled to decide **b)** qualities that together constitute the ideal of moral propriety or merit moral approval
Fault	**a)** to find a mistake in something **b)** weakness of character
Shedding	to cause blood to flow by cutting or wounding

Unit 2

Contest	a struggle for superiority or victory
Participate	**a)** to take part in an activity or event **b)** to take part or have a share in something in common with others
Express	a way of speaking to show mood or feeling
Opinions	**a)** your beliefs or ideas about a particular subject **b)** a judgment about a person or thing or
Builds	**a)** to make something develop or form **b)** to move or grow toward a peak

Module 6

Unit 1

Associated	**a)** closely connected with another **b)** to combine or join with other parts
Production	**a)** making or growing things to be sold as products **b)** the amount produced
Cultivation	**a)** the act of preparing land for the raising of crops **b)** to break up the soil for growing plants
Employment	**a)** the act of hiring a person for work **b)** activity in which one engages

Opportunities	**a)** chances to better oneself **b)** favorable combination of circumstances, time, and place
Livelihood	means of obtaining the necessities of life such as clothing, feeding and shelter
Expected	**a)** to believe that something will occur and wait for it to happen **b)** look forward to the coming or occurrence of something
Complained	**a)** to express grief, pain, **b)** to accuse someone of wrongdoing
Shortage	a situation in which there is not enough of something that people need
Supply	to provide people with something that they need or want especially regularly over a long period of time
Famine	a situation in which a large number of people have little or no food for a longtime and many people die
Products	something useful or valued that is grown, made in factory or taken from nature
Contribute	to give money, idea to something that a lot of other people have part in

Unit 2

Involve	to take part actively in a particular activity
Rear	**a)** to look after animals until they are fully grown for use or to be sold **b)** to bring by continuous care to a stage at which one is fully grown
Engage	**a)** to provide occupation for **b)** to cause to take part
Large scale	the process of making a large number of farm produce available for large number of people
Raw materials	basic materials that can be used to make or create something
Create	**a)** to make or bring into existence something new **b)** to produce or bring about something by a course of action or behavior
Equipment	implements used in an operation or activity
Monitored	to watch, keep track of, or check for a special purpose
Managed	**a)** to make and keep under one's control **b)** to look after and make decisions about

Appendix II
QUESTIONNAIRE ON LEARNERS' ATTITUDE TOWARDS ICT-BASED LEARNING

You are required to kindly complete this questionnaire as carefully as you can. There are list of questions constructed to find out you attitude towards ICT-based learning particularly on talking book and mobile phone. Read each statement and indicate your decision by a (**x**) in the appropriate column. There is no 'right' or 'wrong' option. Feel free to respond. Thank you.

Section 1: Demographics

Gender: Male ☐   Female ☐

Age: 15-55 ☐   56-75 ☐

Marital status: Single ☐   Married ☐   Widowed ☐

Occupation: Farmer ☐   Artisan ☐   Entrepreneur ☐   Civil servant ☐
Others ☐

Level of education completed: Secondary school ☐   Primary school ☐

Basic literacy ☐

Local government area ....

Section 2: Access to Technology

Please indicate by ticking 'Yes' or 'No' if any of these technologies are used in your center during English language lessons.

Types of Technology	Yes	No
Desktop Computers		
Laptops		
Pads		
Mobile phones		
Talking books		
Radio/Television		
Disc/Mp3 player		
Videos		
Projectors		
Internet		

Section 3: Attitude towards ICT-based learning
Please indicate your agreement with the following statements: tick the column that best represent your opinion.

S/N	Statements	Strongly Agree	Disagree	Agree	Strongly Disagree
1	I hate ICT				
2	I like ICT				
3	I like studying with ICT				
4	I do not like studying with ICT				
5	I feel confident in using ICT devices				
6	I enjoy using ICTs for learning				
7	ICT is interesting for me				
8	ICT is easy for me				
9	The technical language puts me off using ICT				
10	I believe that ICT-based learning gives me the opportunity to acquire new knowledge				
12	I believe that ICT- based learning enhances my learning experience				
13	I believe that convenience is an important feature of ICT-based learning				
14	ICT- based learning increases the quality of learning because it integrates all forms of media .e.g images, audio etc				
15	Adopting ICT-based learning allows for increased learner satisfaction				
16	ICT can enhance learners' participation, and feedback to facilitators				
17	ICT can enhance collaboration among learners				
18	ICT can enhance facilitator and learner interaction				
19	ICT tends to increase learners' learning motivation				
20	ICT can enhance learners' reading skills				

Section 4: Learners Experience using Mobile Phone

Please skip this section if it is not applicable to you. Indicate your agreement with the following statements: tick the column that best represent your opinion. There are list of questions constructed to find out your experience using mobile phone to learn ESL reading in the area of vocabulary.

S/N	Statements	Strongly Agree	Agree	Disagree	Strongly Disagree
1	Information on the screen was properly formatted for reading				
2	Information on the screen was easy to read				
3	The screen on this technology device helps me to read longer				
4	The graphic illustrations on the screen were clear				
5	Amount of information presented on screen was not cumbersome				
6	I find it difficult reading on the screen of this technology device				
7	I can't read for long on the screen of this technology device				
8	Reading on the screen of this technology device makes reading interesting				
9	The content provided on this device is cumbersome and difficult to understand				
10	I can relate to the information provided in the content easily				
11	The instructional content provided is contextually and culturally represented				
12	Navigation (moving) through the (content) modules was easy.				
13	The interface to instructional content was easy to use				
14	The content provided were informative and useful for my needs				
15	The content provided helps in learning new words				
16	The pictorial representations give cues on the content provided				
17	The pictorial representation of concepts provided are familiar				
18	The pictorial representations of concepts provided could be easily interpreted.				
19	The graphic illustrations of concepts are culturally and contextually represented				
20	This technology provides flexibility for me to learn and read anywhere and at any time				

Section 5: Learners Experience using Talking book

Please skip this section if it is not applicable to you. Indicate your agreement with the following statements: tick the column that best represent your opinion. There are list of questions constructed to find out your experience using talking book to learn ESL reading in the area of vocabulary.

S/N	Statements	Strongly Agree	Agree	Disagree	Strongly Disagree
1	Information on the screen was properly formatted for reading				
2	Information on the screen was easy to read				
3	The screen on this technology device helps me to read longer				
4	The graphic illustrations on the screen were clear				
5	Amount of information presented on screen was not cumbersome				
6	I find it difficult reading on the screen of this technology device				
7	I can't read for long on the screen of this technology device				
8	Reading on the screen of this technology device makes reading interesting				
9	The content provided on this device is cumbersome and difficult to understand				
10	I can relate to the information provided in the content easily				
11	The instructional content provided is contextually and culturally represented				
12	Navigation (moving) through the (content) modules was easy.				
13	The interface to instructional content was easy to use				
14	The content provided were informative and useful for my needs				
15	The content provided helps in learning new words				
16	The pictorial representations give cues on the content provided				
17	The pictorial representation of concepts provided are familiar				
18	The pictorial representations of concepts provided could be easily interpreted.				
19	The graphic illustrations of concepts are culturally and contextually represented				

20	This technology provides flexibility for me to learn and read anywhere and at any time.				
21	The speech component on this device is local but difficult to understand				
22	The accent of the speech component on the device is local and easy to understand				
23	The speech component on this device is clear, audible and is easily understood.				

 Sources: Adapted from Ally, McGreal, Schafer, Tin & Cheung, B. (2007), Ayebi-Arthur (2010), & Rhema & Miliszewska (2014).

Appendix III
ENGLISH VOCABULARY ACHIEVEMENT TEST
Section A

Name:

Literacy center:

Sex: Male ☐

Female ☐

Age: 15-50 ☐   **51 and above** ☐

Section B

Instruction: **Answer all questions**

1) Drug abuse is the -----------------------------
   A)   Right way of using drugs   B) Good way of using drug
   C)   Wrong way of using drugs   D) Taking drugs always

2) Medications means

   A) Drugs given to people who are sick   B) Food given to people who are sic

   C) Place where sick people are kept   D) Name given to sick people

3) To educate means……………………………

   A) To blame   B) To fight

   C) To sing   C) To teach

4) Another word for **depression** is ………………………..

   A) Sadness   B) Happiness

   C) Faithfulness   D) Greatness

5) Safety is about………………………..

   A) Destroying lives and properties   B) Fighting with our neighbours

   C) Protecting ourselves and environment from danger   D) None of the above

6) When that a person, community or country is in danger. This indicates……………..

   A) Security   B) Insecurity

   D) Community   D) Authority

7) Bushes and uncompleted buildings around us can be a hideout for

   criminals that can expose us to …………………..

   A) Peace   B) Security   C) Danger   D) Police

8) Another name for the word **hideout** is.………………………

   A) Resting place   B) Duty place

   C) Dressing place   D) Hiding place

9) To be free from sicknesses, diseases and infections could mean that one is…………..

   A) Happy   B) Secured   C) Insecured   D) Healthy

10) ………… can harm the body

   A) Diseases   B) Food   C) Exercises   D) Fruits

11) Things we do that make us happy, exercise our mind and brain

    are called.………………………

   A) Hobbies   B) Nutrients   C) Food   D) Vitamins

12) To **relax** means to.……………………….

   A) Work   B) Fight   C) Rest   D) Cry

13) A woman who is paid by parents to look after their child or children

    is called.………

    A) Painter   B) Cleaner   C) Banker   D) Nanny

14) To tiptoe means to……………. quietly

   A) Smile   B) Walk   C) Dance   D) Eat

15) When parents raise their children by loving, caring, encouraging and equipping

    them with proper spiritual, moral and cultural values, it is called……………

   A) Nuclear family   B) Extended family

   C) Bad parenting   D) Good parenting

16) One thing that is common to violence is ………………

A) Happiness   B) Bloodshed   C) Friendship   D) Love

17) Another word for **fault** is……………..

A) Mistake   B) Right   C) Instruction   D) Law

18) To take part in an event is also known as……………………

A) Separation   B) Participation   C) Addition   D) Conclusion

19) People who want to represent their various communities in an election are called……………
    E) Candidates   B) Constituency

    C) Communities   D) Country

20) ………………… is a powerful form of expression
    E) Electorates   B) Voting rights   C) Participants   D) Election

21) Another word for shortage is------------------
    A) Plenty   B) Small   C) Lack   D) Many

22) Farming provides the followings except......................
    A) Raw material   B) Employment   C) Shortage of food
    D) Means of livelihood

23) The followings are modern day farming equipment except......................
    A) Hoes   B) Tractor   C) Harvesters   D) Planters

24) Farming involves doing the followings except.................
    A) Not working at all B) Raising of animals
    C) Planting of trees   D) Planting of crops

25) Farming **equipment** means..........................
    A) Food we eat at the farm
    B) Instrument we use on the farm
    C) Animals we kill on the farm
    D) People we see on the farm

Appendix IV

ICT-Based Learning Lesson Plan (IBLLP) Template

Items	Description
Introduction	This section briefly describes what the lesson in each unit of the module is about. It is intended to create background knowledge on each module and also gives the outlines of the points to be treated under each unit.
Objectives	This section explains and outline the expected outcome to be achieved after learners might have been exposed to the content of each unit within the module
Topic	This section contains the subject matter to be treated in each unit of the modules. These subject matters are intended to keep the learners informed on issues like Health Living, Security, Voting Right, Parenting, Drug Abuse and Farming among others within the Nigerian context. This is also intended to teach reading with focus on vocabulary acquisition and development which shall be based on most frequently used words as well as words important for learners' survival and success.
Learning points	This section recapitulates the key points in the instructional content and also highlights the most important points in the units for the learners to keep in mind after interacting with the content
Activities	This section contains class exercises learners are expected to attempt at the end of each lesson. This is to test their knowledge and provide feedbacks on what they have learnt from the lessons. They are structured in line with the objectives under each unit.
Tasks	These are piece of work to be done by learners at the end of each unit. These tasks are intended to evaluate the learners at the end of each lesson.
Graphic illustrations	The graphic illustrations help in providing context cues that foster better understanding of the content.
Glossary	The in-built glossary provides the meaning of the highlighted words within the text.

Instructional Guide on Mobile phone-Based Instructional Tool (IGMPBIT)

       This instrument is designed by the researcher to guide the facilitators in the Experimental Group 2. It provides step by step guide on how participants can use the mobile phone-based instructional tool. It consists information on how the participants can navigate on their mobile devices on which the instructional content for this study has been deployed in order to access it. This is to ensure uniformity in the research process. This instrument is made up of the following steps:

- Press the power button
- Look for the menu button
- Tap on the menu button
- Look for icon named *Articulate*
- Tap on the *articulate* icon
- Tap on the Mobile phone-based instructional content to open it
- Tap on the *resume* to access the instructional content
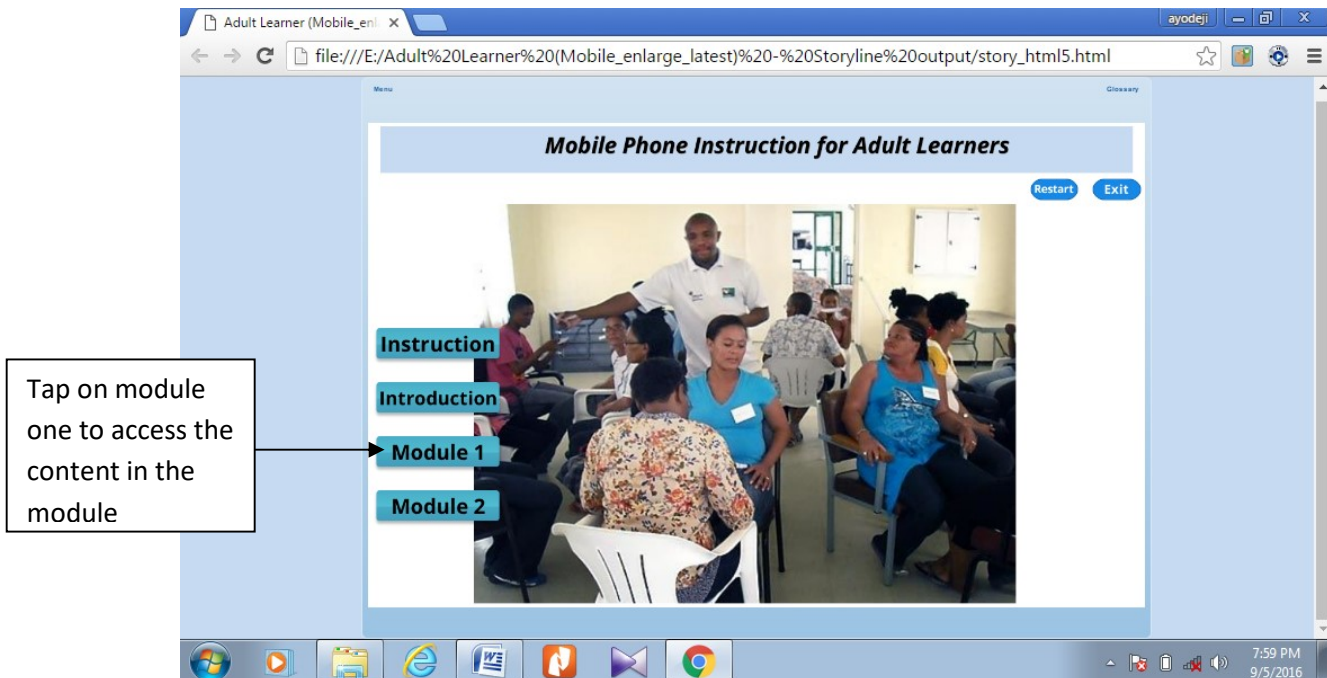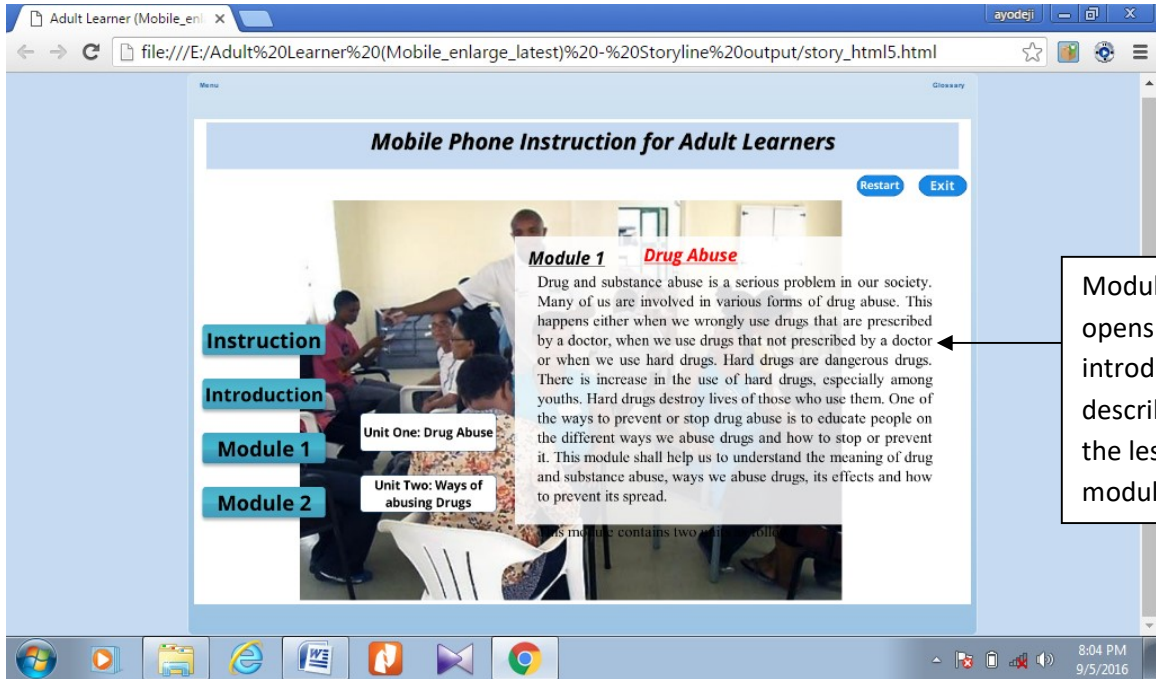
Module one opens with the introduction describing what the lesson in that module is about
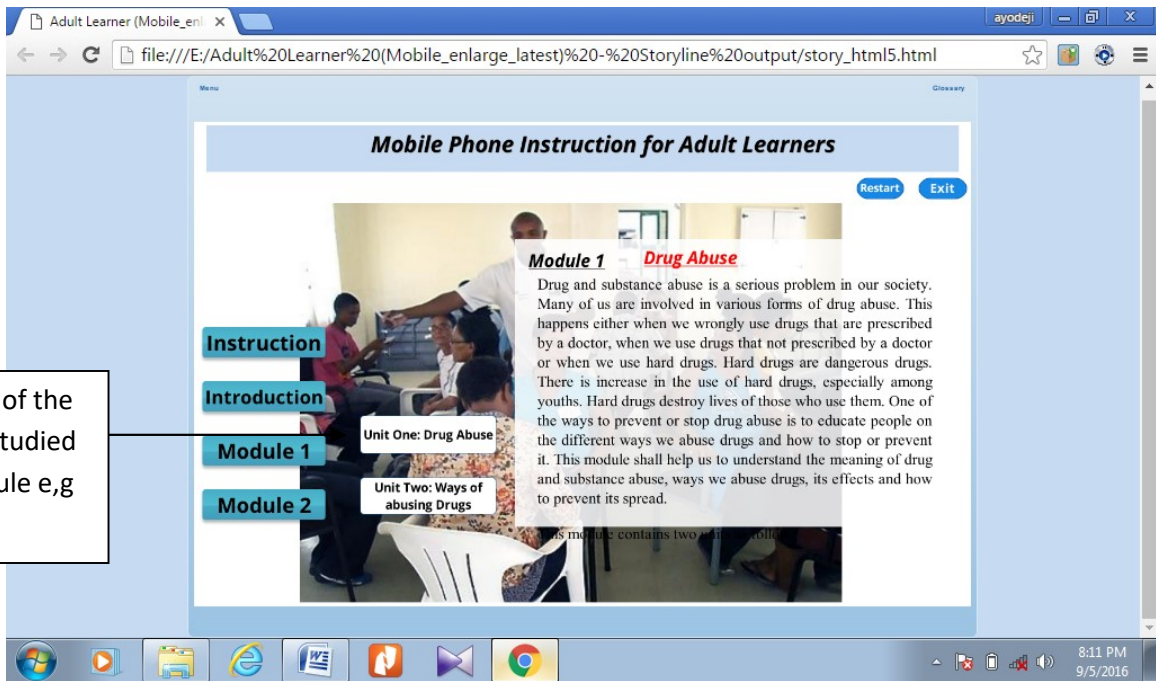
Tap on any of the unit to be studied in the module e,g unit one
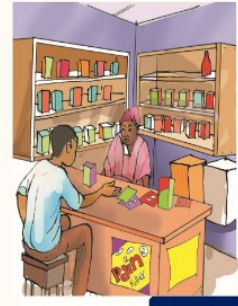
Welcome

Unit One: Drug Abuse

Objectives:
At the end of this unit, you should be able to:
✓ Explain 'drug abuse'
✓ Mention one of the common ways people abuse drugs
✓ Give the meaning of the highlighted words in the passage and use them in correct sentences

Next

Unit one opens

Tap on *next* to move to the next page
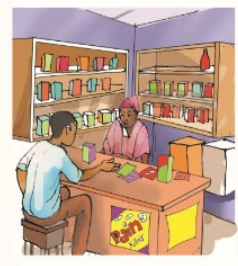
Unit One: Drug Abuse

Frame 1

Mr. Makanju is a driver. One morning he became so sick that he could not drive his bus. He decided to **approach** a roadside chemist to buy some **medications**. He took the **medications** quickly because he wanted to get well fast. But instead of getting better his **sickness** became worse. His friends at the motor park rushed him to the hospital when his condition became very bad. They were afraid that their friend would die. deliverables.

Back

Next

Tap on *back* to go back to the previous page

178

Screenshot 1 annotations:
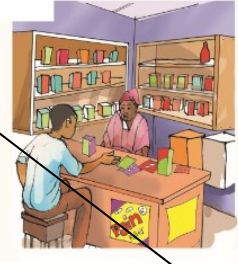
Unit One: Drug Abuse

Frame 1

a substance used in treating disease or something that affects well-being

Mr. Makanju is a driver. One morning he became so sick that he could not drive his bus. He decided to **approach** a roadside chemist to buy some medications. He took the **medications** quickly because he wanted to get well fast. But instead of getting better his **sickness** became worse. His friends at the motor park rushed him to the hospital when his condition became very bad. They were afraid that their friend would die. deliverables.

Back   Next

Meaning of the word **medications**

Tap on the highlighted words to view their meanings

Screenshot 2 annotations:

Unit One: Drug Abuse

Frame 4

Mr. Adegbayi, Makanju's friend, was confused. He asked the doctor to explain better what drug abuse is. He said he thought that only people who take hard drugs like marijuana, codeine, valium or cocaine are the ones involved in drug abuse. The doctor told him that drug abuse means the use of drug in the wrong way. This is the most common way of abusing drug. "Drugs are meant to **cure** but you can harm yourself when you use more than you need", doctor Omololu explained.

Back   Learning Points

Tap on the *learning points* to go through the key points of the lesson

The *learning points* opens

Tap on *activities* to participate in the class activities

First screenshot annotations:

Read and follow the instruction on how to go about the activity

Activity opens with the instruction on how to go about the activity

ACTIVITY: Unit One: Drug Abuse

Instruction: Use the glossary to give another word in the empty boxes that have the same meaning as the words in the boxes below. For example: Click the button 'Start' when you are ready.

Start

Tap on *start* to begin the class activities

Second screenshot annotations:

ACTIVITY: Unit One: Drug Abuse

Word		Box
Approach	→	Move towards
Medication	→	type your text here
Sickness	→	type your text here
Prescribe	→	type your text here
Instruction	→	type your text here
Cure	→	type your text here

The activity opens

Next

Tap on *next* to move to the *tasks* page

Fill in the blank spaces with correct answer from option A-D

1. Drug abuse is the

   ○   Right way of using drugs

   ○   Taking drugs always

   ○   Good way of using drug

   ○   Wrong way of using drugs

The task page opens
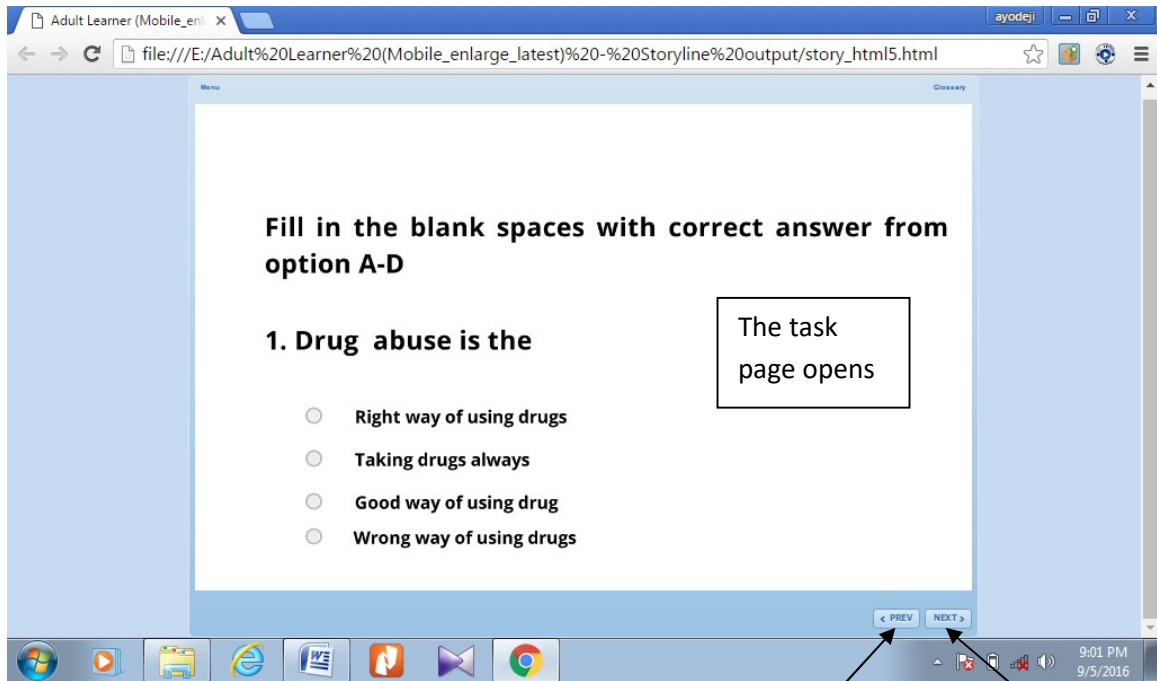
Tap on *prev* to go back to the previous page

Tap on *next* to move to the next page

Fill in the blank spaces with correct answer from option A-D

1. Drug abuse is the

   ○   Taking drugs always

   ○   Good way of using drug

   ○   Right way of using drugs

   ○   Wrong way of using drugs
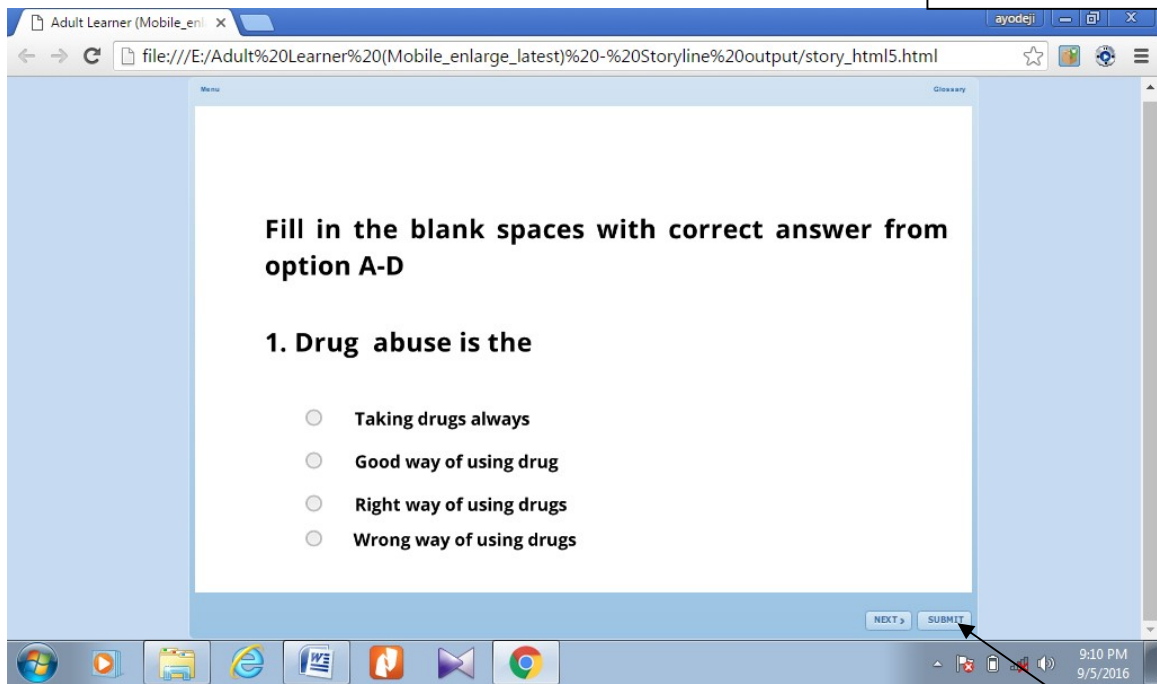
Tap on *submit* to lock in your activities and tasks in other to view your scores

Results

Your Score: 100% (50 points)
Passing Score: 80% (40 points)

Your score is shown here

Result:
✔ Congratulations, you passed.

Review Quiz
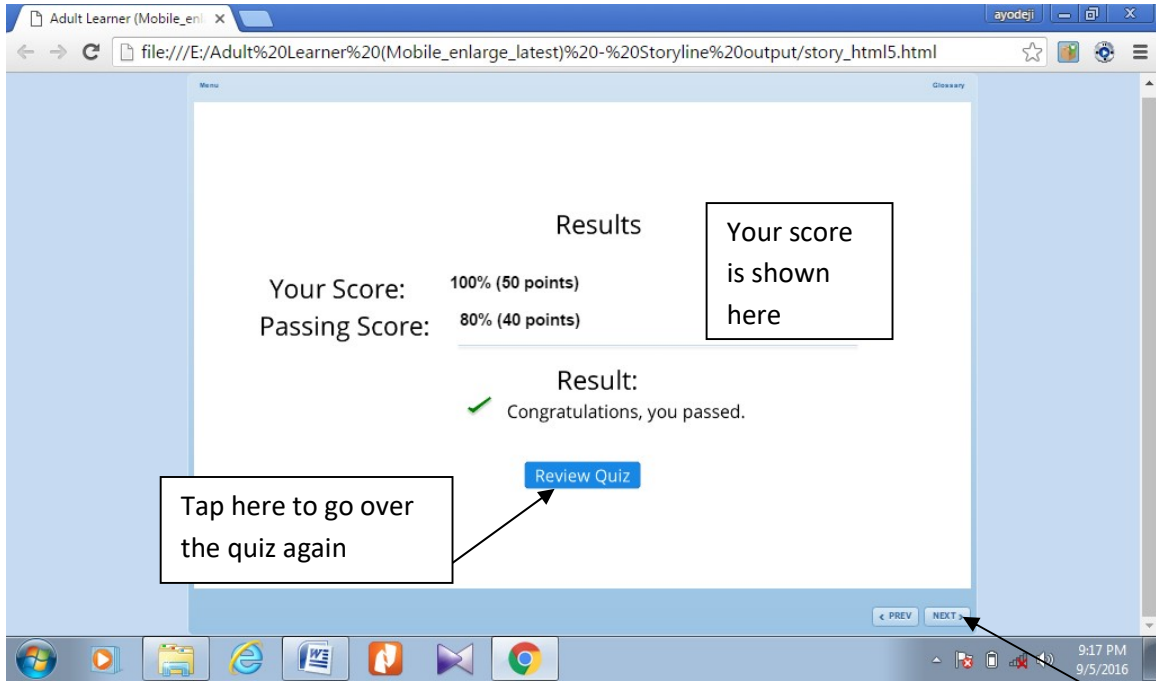
Tap here to go over the quiz again

< PREV   NEXT >

Tap here to move to unit two

Welcome

Unit Two: Ways of Abusing Drugs, Effects and Prevention

Objectives:
At the end of this unit, you should be able to:
✓ Describe at least two ways by which people abuse drugs
✓ Mention at least five effects of drug abuse
✓ List three ways of preventing drug abuse
✓ Give the meaning of the highlighted words in the passage and use them in correct sentences

Unit two opens

Next
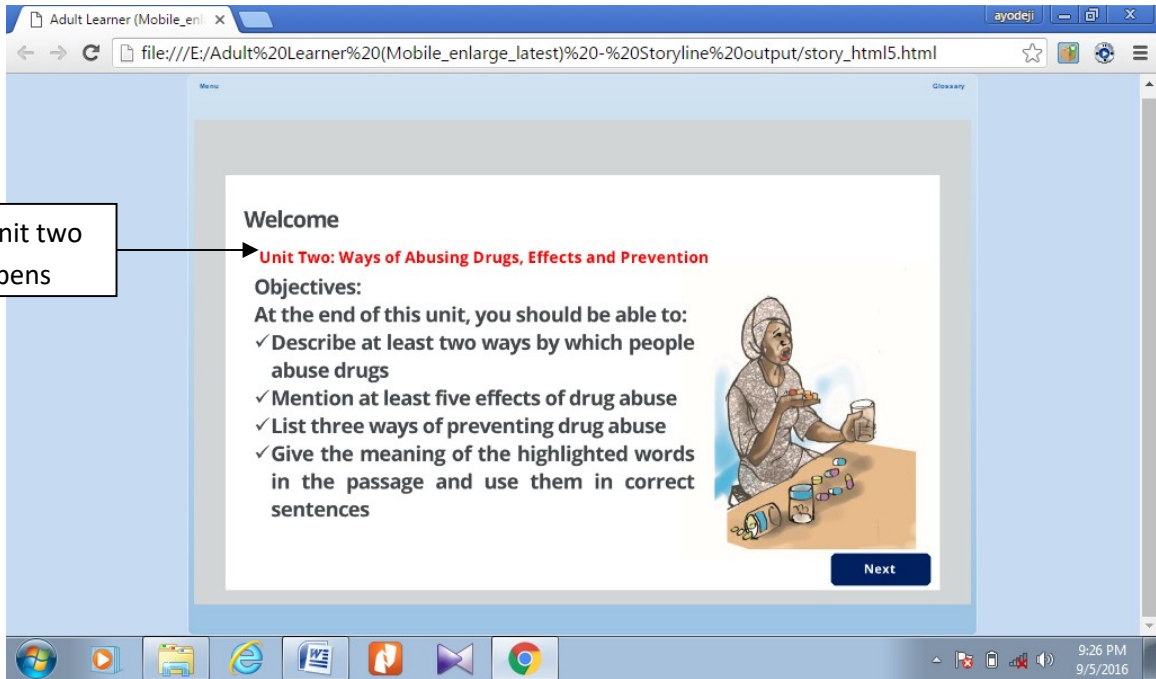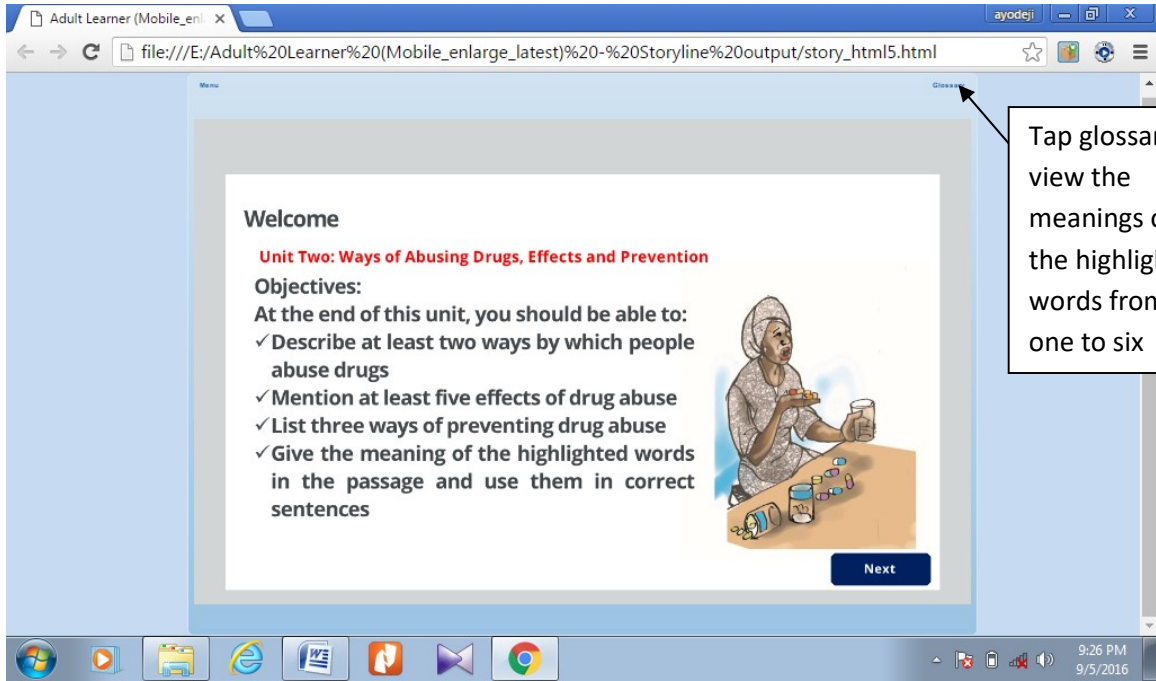
Tap glossary to view the meanings of all the highlighted words from mole one to six

Welcome

Unit Two: Ways of Abusing Drugs, Effects and Prevention

Objectives:

At the end of this unit, you should be able to:
- ✓ Describe at least two ways by which people abuse drugs
- ✓ Mention at least five effects of drug abuse
- ✓ List three ways of preventing drug abuse
- ✓ Give the meaning of the highlighted words in the passage and use them in correct sentences

Next
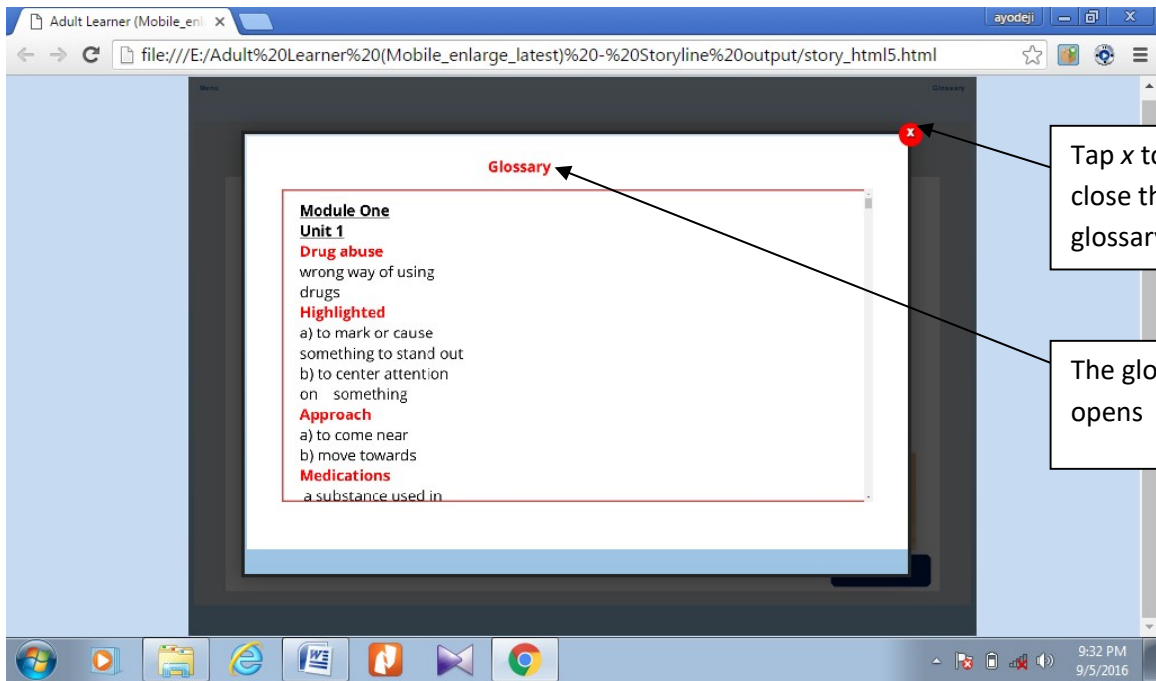
Tap *x* to close the glossary page

The glossary opens

Glossary

Module One
Unit 1
Drug abuse
wrong way of using drugs
Highlighted
a) to mark or cause something to stand out
b) to center attention on something
Approach
a) to come near
b) move towards
Medications
a substance used in

Tap menu to go back to the menu page

Back to menu page

Appendix VI

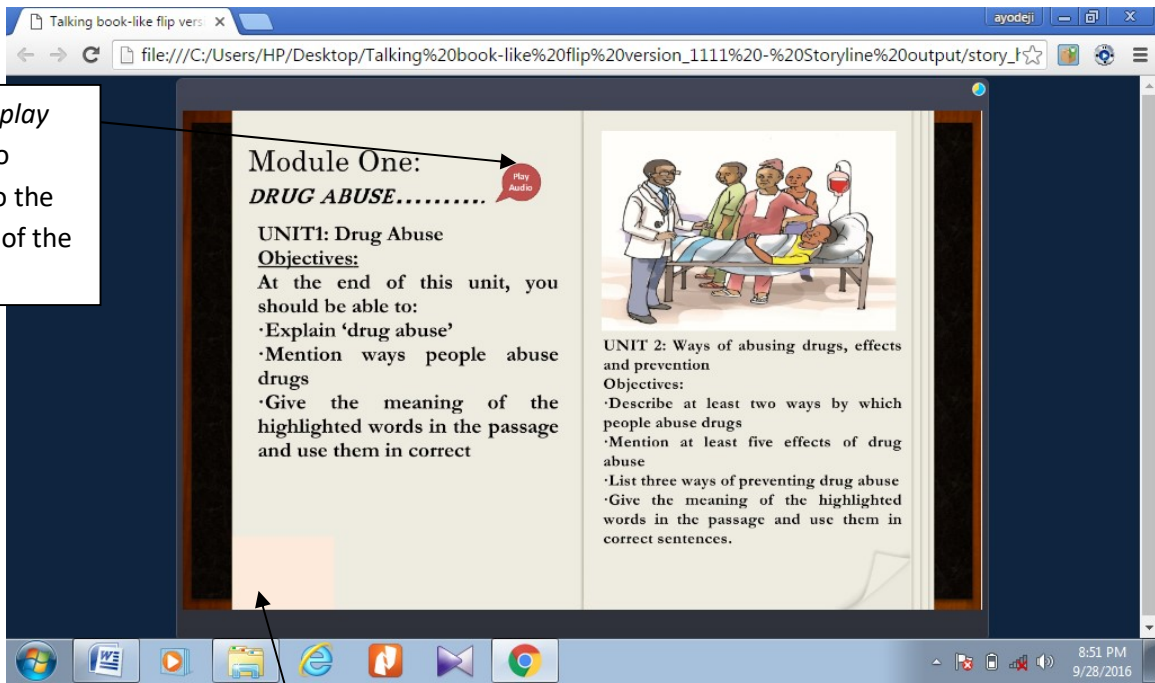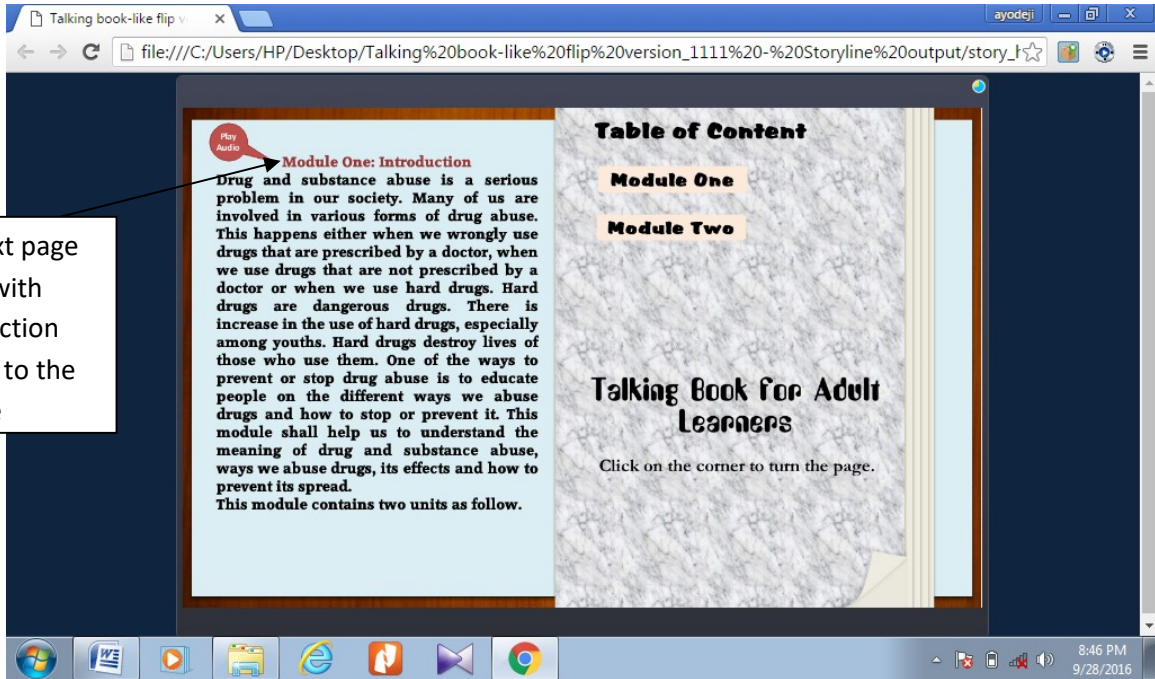**Instructional Guide on Talking Book-Based Instructional Tool (IGTBBIT)**

This instrument is designed by the researcher to guide the facilitators in the Experimental Group 1. It provides step by step guide on how participants can use the talking book-based instructional tool. It consists information on how the participants can use the electronic device on which the instructional content for this study has been deployed in order to access it. This is to ensure uniformity in the research process. This instrument is made up of the following steps:

- Press the power button
- Look for the menu button
- Tap on the menu button
- Look for icon named *Articulate*
- Tap on the *articulate* icon
- Tap on the Talking book-based instructional content to open it
- Tap on the *resume* to access the instructional content

Tap on this corner to turn to the next page

The next page opens with introduction leading to the module

Module One: Introduction
Drug and substance abuse is a serious problem in our society. Many of us are involved in various forms of drug abuse. This happens either when we wrongly use drugs that are prescribed by a doctor, when we use drugs that are not prescribed by a doctor or when we use hard drugs. Hard drugs are dangerous drugs. There is increase in the use of hard drugs, especially among youths. Hard drugs destroy lives of those who use them. One of the ways to prevent or stop drug abuse is to educate people on the different ways we abuse drugs and how to stop or prevent it. This module shall help us to understand the meaning of drug and substance abuse, ways we abuse drugs, its effects and how to prevent its spread.
This module contains two units as follow.

Table of Content

Module One

Module Two

Talking Book for Adult Learners

Click on the corner to turn the page.

Tap on *play audio* to listen to the voicing of the book

Module One:
DRUG ABUSE..........

UNIT1: Drug Abuse
Objectives:
At the end of this unit, you should be able to:
·Explain 'drug abuse'
·Mention ways people abuse drugs
·Give the meaning of the highlighted words in the passage and use them in correct

UNIT 2: Ways of abusing drugs, effects and prevention
Objectives:
·Describe at least two ways by which people abuse drugs
·Mention at least five effects of drug abuse
·List three ways of preventing drug abuse
·Give the meaning of the highlighted words in the passage and use them in correct sentences.

Tap on this corner to turn to the previous page

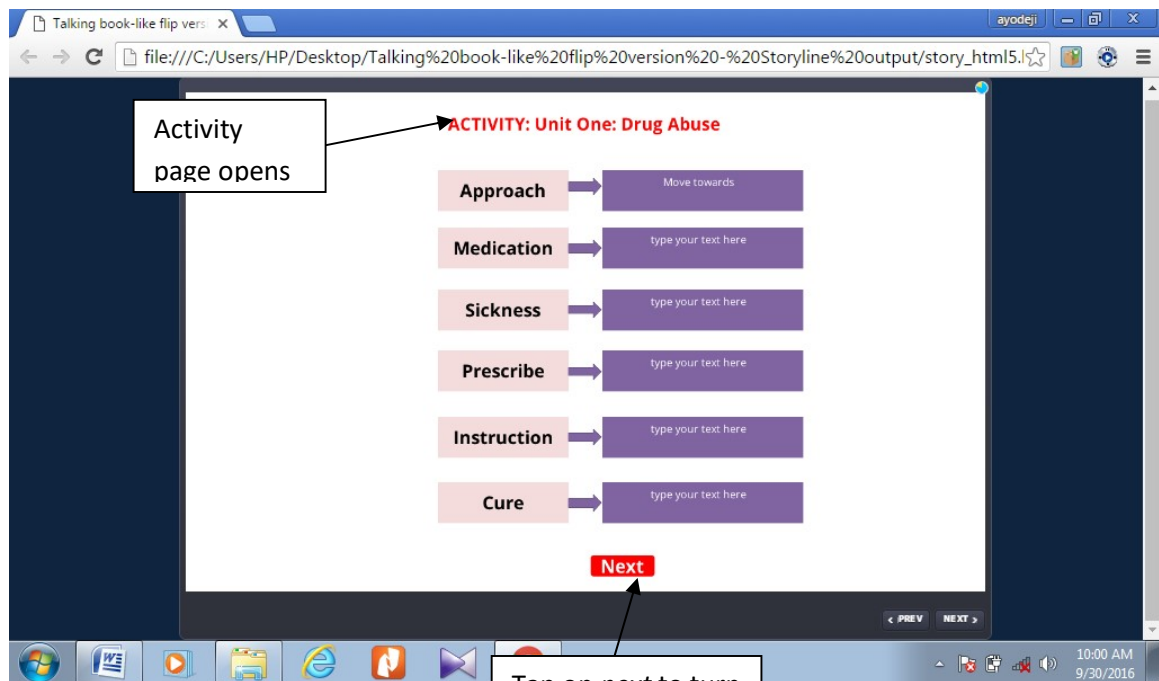Tap on any of the highlighted words to listen to their meanings

Pay close attention to the learning points

Read the instruction given above to guide you to the activity

Tap on *prev* to back to the previous page

Tap on *next* to move to the next page

Activity page opens

Tap on *next* to turn to tasks page

The task page opens with the instruction to follow

Fill in the blank spaces with correct answer from option A-D

1. Drug abuse is the

- ○ Wrong way of using drugs
- ○ Good way of using drug
- ○ Right way of using drugs
- ○ Taking drugs always

Tap on *next* to move to the next page

Tap on *submit* to submit your answer

Results

Your score is shown below

Your Score: 80% (40 points)

Passing Score: 80% (40 points)

Result:

✔ Congratulations, you passed.

Review Quiz   Unit 2

Tap here to go through the quiz all over again

Tap here to move to the next unit

Appendix VII

Instructional Guide on Conventional Method (IGCM)

This instrument is designed by the researcher to guide the facilitators in the control group. Learners in this group will not use ICT-based instructional tools. The facilitators in this group will use the conventional approach in the teaching of ESL reading following the instructional guide on conventional method provided by the researcher in order to follow the instructional content found in the treatment guide to ensure uniformity. The steps in this instrument are made up of the followings:

- Facilitator introduces the lesson
- Facilitator reads the passage along with learners
- Discuss the passage read
- Facilitator writes new words on the passage
- Facilitator gives the meaning of those words through the use of dictionary, content clues
- Facilitator use those words in sentences
- Facilitators asks the learners to use those words in new sentences
- Learners answers the questions on the passage

A- For participants using Mobile phones

Observational ICT Skills Rating Sheet Instruction: This instrument provides information on what the participant can do on the ICT devices. The research assistant observes the participants as they use the ICT devices and check the blank space along the options of competent, moderately competent and not competent. This instrument is designed to be used to determine the ICT skills of participants in the use of ICT devices to be given to them in the learning of ESL. The instrument is expected to measure the key boarding and navigating skills of the participants.

Observer's Name……………………………………….

Literacy Center …………………………………………...

Please tick the box that corresponds to your observation.

S/n	Skills Criteria		Competent	Moderately Competent	Not competent
1	Keyboarding skill				
	a	Location of keys			
	b	Speed			
	c	Typing skills			
	d	Typing accuracy			
2	Navigation skills				
	a	Press the power button			
	b	Look for the menu button			
	c	Tap on the menu button			
	d	Look for Articulate icon			
	f	Tap on the articulate icon			
	g	Look for the Mobile phone-based ESL instructional content			
	h	Tap on the mobile phone-based instructional content to open it			
	i	Tap on the *resume* to access the instructional content			
	j	Tap on the module one in other to access the module			
	k	Tap on *next* to move to the next page			
	l	.Tap on *back* to go back to the previous page			
	m	Tap on any of the highlighted words to access it meaning			
	n	Tap on menu to go back to the starting page			

Rating Scale   Marks

Competent   3

Moderately competent   2

Not competent

B-for participants using Talking book

Observational ICT Skills Rating Sheet Instruction: This instrument provides information on what the participant can do on the ICT devices. The research assistant observes the participants as they use the ICT devices and check the blank space along the options of competent, moderately competent and not competent. This instrument is designed to be used to determine the ICT skills of participants in the use of ICT devices to be given to them in the learning of ESL. The instrument is expected to measure the key boarding and navigating skills of the participants.

Observer's Name…………………………………………….

Literacy Center ………………………………………...

Please tick the box that corresponds to your observation.

S/n	Skills Criteria		Competent	Moderately Competent	Not competent
1	Keyboarding skill				
	a	Location of keys			
	b	Speed			
	c	Typing skills			
	d	Typing accuracy			
2	Navigation skills				
	a	Press the power button			
	b	Look for the menu button			
	c	Tap on the menu button			
	d	Look for Articulate icon			
	f	Tap on the articulate icon			
	g	Look for Talking book for adult learners			
	h	Tap on the talking book for adult learners			
	i	Tap on the *resume* to access the instructional content			
	j	Flip at the edge of the talking book to access the content			
	k	Flip on the right hand side below at edge of the talking book to move to the next page			
	l	Flip on the left hand side below at the edge of the talking book to go back to the previous page			
	m	Tap on any of the highlighted words to listen to it meaning			
	n	Tap on the *play audio* button listen to the whole passage read			

Appendix IX
In-Depth Interview (IDI)

The in-depth interview will be used to supplement the questionnaire. This will be used to elicit information from the facilitators involved on how they perceive the impact of the intervention on participants vis-à-vis the study objectives.

A) Learners' reaction to the intervention
   i) How did the learners view the use of ICT in the learning of vocabulary?
   ii) What feature of these devices do you think help in facilitating the learning of vocabulary (illustration, text audio)?
   iii) Was the content relevant to learners needs and were they able to relate well with it?
   iv) Did these devices increase learners desire to read and learn new words?
   v) Did these devices encourage learners to learn on their own and outside the classroom?

B) Learning outcome
   i) Were learners able to learn more new words using these devices?
   ii) Did the use of these devices improved learners reading skill in anyway?
   iii) What is the learners' attitude to the use of ICT in learning to read in English?
   iv) Do learners demonstrate any improvement in the use of ICT to learn vocabulary?

C) Success of the programme
   i) What difficulty do learners have in using these devices for leaning?
   ii) What did the learners think is missing or should be added?
   iii) Was there an increase or otherwise in attendance of learners as a result of this programme?
   iv) What are the strengths of this programme
   v) What are the weaknesses of this programme

Appendix XII
Cloze Test to Test for the Readability of the Instructional Content Package
Instruction: Fill in the blank spaces with the correct words that best complete the expressions given below:
Passage One

Sometimes people use drugs that doctors did not prescribe or give them. This is very dangerous. Some people practice drug abuse by using sleeping ……………….... Sometimes, they do this because they are tired and ……………... . to sleep for long hours."

A person can abuse drug by drinking too much …………………… and by smoking cigarette. If a person continues in this act for a long ………………., the body will get used to it. This will make the person to want to…………………… it all the time. This is called drug addiction," Dr. Omololu continued.

"We can prevent drug abuse by using our ……………….. the right way and by buying medications only from ………………………… stores that government approved. Whenever we are sick, we should go to the ………………. We should also avoid bad friends who can force us to use hard drugs."

Passage Two

Kunle was coming from school on a Wednesday afternoon in company of his friends, Sola and Bayo. After they crossed the road, they saw smoke …………………….. from an uncompleted building nearby. They also heard some noise coming from the …………………… Kunle told his friends that they should check the …………………………… together.

Sola agreed but Bayo did not. He was very afraid. He told Kunle and Bayo not to put their ……………… in danger. It is the duty of the police to .... the safety of our community. But Sola disagreed with Bayo. He told Bayo that safety means protecting ourselves and our ………………………… from danger. Good citizens must recognize danger when they see one.

Bayo scratched his head. He was not convinced. He asked Kunle again why they should be ………………………… for protecting themselves and others. "The police cannot be everywhere," Kunle said. Therefore, we must do our part by being …………………… and observant of things that happen around us. It is not our duty to face bad ……………………… but it is our duty to report them to the police.