AN EVALUATION OF INDIVIDUALIZED INSTRUCTION AS USED IN THE
ACCELERATED CHRISTIAN EDUCATION CURRICULUM IN PLATEAU
STATE, NIGERIA.

By

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DECLARATION

I hereby declare that the dissertation AN EVALUATION OF INDIVIDUALIZED INSTRUCTION AS USED IN THE ACCELERATED CHRISTIAN EDUCATION CURRICULUM IN PLATEAU STATE, NIGERIA submitted for the degree of Master of Education in Didactics (98434) at the University of South Africa is my own original work and has not been previously submitted to any other institution of higher education. I further declare that all the sources cited or quoted are indicated and acknowledged by means of a comprehensive list of references.

(Mrs.) Shaba, Christiana Oluleye

45953228
DEDICATION

This work is dedicated to the glory of GOD, the One who made it possible for me to start and finish in spite of the many obstacles. I GIVE YOU GLORY FATHER OF LOVE AND MERCY FOR YOUR FAITHFULNESS AND UNFAILING LOVE. AMEN.

I also dedicate it to my parents Rev Dr J.A. and Mrs S.M. Bodunrin, my Loving husband Rev. Dr A.A. Shaba and my lovely children IyanuOluwa, IyinOluwa, IreOluwa, IbukunOluwa and Oluwaseun without whom this work could never be completed. GOD BLESS YOU.
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ABSTRACT

The dissertation is focused on exploring the aspects of the Accelerated Christian Education curriculum that shows its Individualized nature.

The aim of the study was to explore individualized instruction from the view of the ACE program with a view of possible recommendation for use on a wider scale in Nigerian schools. This was considered because of the several lapses identified in the present Nigerian education program.

The research explored other teaching and learning methodologies to establish commonality and assess if indeed the programs form of individualization is related to any existing form.

Interviews were conducted to get the experiences of students and supervisors who are using the program.

Recommendations were made for consideration to the users of the program on the strengths and weaknesses examined and suggestions for possible improvement given based on the responses of the research participants.

KEY TERMS

Individualized Instruction; Programmed Instruction; Mastery Learning; Personalized learning; Accelerated Christian Education; Christian Education; Learning centred Methodologies; Nigerian Education; Behaviorist learning methodologies; Qualitative research.
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LIST OF ABBREVIATIONS

ACE- Accelerated Christian Education

PACE – Packet of Accelerated Christian Education

USA- United States of America

CIE – Cambridge International Examinations

ICCE – International Certificate of Christian Education

NARIC – National Recognition Information Centre for the United Kingdom

NPE – National Policy on Education

MKO – More Knowledgeable Other

ZPD- Zone of Proximal Development

ECWA - Evangelical Church Winning All.

UPE – Universal Primary Education
CHAPTER ONE
INTRODUCTION TO THE STUDY

Education has gone through many phases since the earliest form of human civilization. There was the time when education was quite informal and mostly by apprenticeship or learning by observation like a daughter learns housekeeping by observing her mother. Gradually, formal education began with the establishment of organized schools.

Several models of Individualized Instruction have been utilized in various classrooms with varying degrees of successes and challenges. The Accelerated Christian Education (ACE) curriculum also lays claim to the use of Individualized Instruction as one of its special features. The focus of this study is to evaluate the use of individualized instruction in the ACE program not only as documented, but also in terms of the experiences of Teachers and Learners who are involved with the program.

1.1 Introduction

1.1.1 A look at the Nigerian Education

To get a good view of what the scenario of the Nigerian education is like, it will be examined under a number of related topics which will shed light on the reason behind this research.

The problem of falling standards in the Nigerian Education sector has been with us for a long time now. It has been the focus of many conferences and seminars over the last decade or more. Several system changes have been recommended and put in place, that is, Universal Primary Education (UPE), 7-5-4, 6-3-3-4, 9-3-4 (Dashen, 2011). These changes in the system of education have created confusion and a lack of stability in the school system.

The various components of Education have also been under scrutiny, that is, the Learners, the Teachers, the Curriculum, the Policies governing the Education Sector, and the Structures involved.

These problems and suggestions for solution have been thoroughly explored in the work of Moja (2000), where he wrote extensively on the major issues in the Nigerian
Education sector. Some of the problems he highlighted include among others: Policy changes, Private School Phenomena, Teacher’s role and Teaching methods.

1.1.1.1 Policy changes
Nigeria has come a long way from the colonial education which only offered Reading Writing and Arithmetic in response to the British government’s need at the time. The realization that the country after independence would have greater needs led to the first National Conference on Curriculum Development in 1969. The outcome of this conference was the implementation of the 6-5-4 system in most States in Nigeria. This system existed until 1983 when the 6-3-3-4 system was introduced. Although the 6-3-3-4 curriculum provided for the development of technology and science literacy, the absence of up-to-date instructional material, high quality equipment and well trained and qualified teachers is the greatest challenge of achieving the objectives of the curriculum. (Uwaifo and Uddin, 2009)

In 2009, the ministry of education decided to re-introduce the discarded 9-3-4 system of education which provides for 9 years of basic education, 3 years of senior secondary education and 4 years of university education. And then in 2011, the new minister of education announced a new education system which took a committee of 30 professionals 3 years to complete this is the 1-6-3-3-4 which provides for 1 year of pre-school (Adeniji, 2013).

This indiscriminate change in policy, created by the constant change in government and an inability or a reluctance of subsequent Education Ministers to continue with the work of their predecessors, has not helped the sector settle down to any measurable growth.

1.1.1.2 Private School phenomenon
In a bid to find an alternative to the failure of the Government to provide quality Education for the people, private schools began to spring up. As far back as the late 70’s there was an increase in the establishment of private schools in Nigeria, a partnership was established in 1999. Many of these owned by retired principals of schools, school administrators and even people, with money, who knew and cared nothing for the improvement of Education standards (Adio, 2010).
This trend seemed to bring relief to parents from the problems of public school system where teachers were not committed to teaching because of poor working conditions such as, lack of classrooms and furniture for proper teaching and learning activities and inadequate remuneration. It however soon brought its own problems such as: the commercializing of education, unnecessary competition among school proprietors causing the exploitation of parents in the charging of fees, employment of unqualified teachers for cheap labor, and the explosion of examination malpractice. Adio (2010) examines this trend further in the article titled ‘The rot in Nigerian Private Schools’.

He pointed out, as one of the reasons for the collapse, that, the age at which children begins school becomes shorter and shorter as parents pride themselves on the young age at which their children complete primary and secondary schools. It has been the practice of most private schools to cut out the primary six classes, and to start the primary one curriculum at the nursery three classes (4-5year olds).

In an article by Adewale (2011), who sited the action of a state in Nigeria on the closure of substandard private schools. He quoted the commissioner of Education Osunyikanmi who said “One of the tragedies of the collapse of our public education system, in the state is the resurgence and the proliferation of private schools and a number of them are one shop schools always masquerading under the name ‘international’ and they are usually run by people of questionable character, others by people without any relationship with education in the first instance.”

On the other hand, Tooley (in Phillipson, 2008.) in a survey conducted in Nigeria, Ghana and Indian reports that most private schools in the poor areas of these countries are the only ways the people can get adequate education for their children considering the failure of the government to provide quality education for these poor communities. He further says that the private schools provide higher quality education because of the fact that they are mostly run as businesses and not charities and are therefore dependent on fees.

Tooley, (in Phillipson, 2008) further concludes that in order to raise the quality of private schools and achieve the goal of ‘education for all’, inviting investors to invest in ‘education for the poor’ is invaluable. Availability of funds will make providing better
infrastructure, employing qualified teachers, reduction of school fees and even help to provide scholarships for underprivileged ones possible.

1.1.1.3 Teachers Role
The fact that the responsibility for learning was still solely in the hands of the teachers made it so there was little or no difference in the products of schools whether public or private, as they could not contribute to the society nor take responsibility for themselves without relying on parental influence, forgery, and malpractices (Omoregie, 2005, cited in Ekundayo, 2010). Ajibola (2008), in his own view believes this practice adopted in Nigerian schools has made it so that the average Nigerian student exhibits ‘lack of initiative, innovation, and skills”.

The teaching system which Clowes (2003) called ‘Teaching to the Middle’ is another problem found in the system. This system assumes that by directing teaching to the average student all needs will be met, but evidence shows that over time the result is that the low-performing student slides lower because the lesson is going above his comprehension and the high-performing student slides to average because he is not challenged enough for his potential.

To be able to teach these new curriculums, teachers have to receive better training to prepare them for the challenge of new innovations. Ajibola (2008) also observes that the reason the objectives of the National Policy on Education is not yet realized is because there are not enough trained personnel to teach the subjects provided for by the policy. The funding is not available either to assist teacher in-training or employ new staff.

1.1.1.4 Learning Gaps
Another problem observed by Ajibola (2008) is the allowance for learning gaps as a result of the Lock-step teaching style in schools. This is possible because the standard pass mark is 50% and if the child has an average of 50% in a term, he is promoted to the next class regardless of his performance in individual subjects thereby creating learning gaps which are continuously carried on through the Educational life of the child, thereby limiting the career opportunities open to him.
Ajibola further explains that there is a wide gap between what the curriculum intends and what the pupils actually learn. The prevalent form of instruction is mostly teacher directed where students only have access to the notes provided by the teacher and is not challenged to explore the topic beyond where the teacher indicates, further work sometimes incurs the displeasure of the teacher and puts the child in direct conflict with the teachers pride and sense of classroom control. Therefore the student is limited to the level of exposure allowed by the teacher.

**Summary**

The above problems form the basis for asking: Can Individualized Instruction be viewed as an alternative to the Lock-step traditional system? There are a number of other programs that the researcher realizes are being used mainly by Missionaries who home school their children but ACE is one of the widely used individualized instruction programs known in Nigeria.

1.1.2 Individualized Instruction

Individualized instruction has been observed to relate with the theory of Constructivism by Jean Piaget. He states that the learner is not a “clean slate” but one who has a previous knowledge on which he can build more knowledge on. The constructivists believe that the learner should be involved in the learning process through group interactions, in a friendly environment with the teacher as a facilitator in the learning process.

Warlick, 2013, defined Individualized Instruction as instructional strategies that are developed and used with an understanding of individual student learning style, readiness, and interest.

He further states that an individualized curriculum is “a rich set of institutionally and politically established competencies that are founded on basic literacies and that can be tested, measured and converted into data that is optimally available to teachers for refining instruction”.

Warlick believes that the learner is expected to be responsible for learning, being an active participant in the learning process, thereby able to express what they understand
and bring out their personal opinion on the subject of study. This implies that unlike the traditional method that believes the learner must be a recipient, the learner is actually a contributor to the content, method, evaluation, and outcome of learning.

Individualized instruction operates a multiage classroom. Students of various ages and abilities are taught together in the same class without grade denigrations. This is often done by properly planned peer learning, collaborative small group, and individual instruction which is based on the needs and interests of the students (Hoffman. 2002).

Hoffman further states that as well as whole group teaching, teacher-led small groups and individual instruction, the student frequently for other groups which includes: common interest groups, shared task groups and dyads.

1.1.3 Accelerated Christian Education

The Accelerated Christian Education bears close resemblance of the Personalized System of Instruction in its practice of Diagnostic Testing for initial academic placement, Self-Pacing,

The Accelerated Christian Education (ACE) Curriculum has been in existence for more than three decades. Dr. Donald Howard began the program in 1970 in Garland, Texas. It has been tested and tried in many countries, Nigeria inclusive. Many parents have found it an alternative to the regular school system which is riddled with constant strike actions, inadequately trained teachers, lack of adequate learning materials and study aids and have taken advantage of the Home School provision. Many schools are also using the program either exclusively or along- side the National Curriculum. (Archives ACE Ministries, 2009).

ACE began in Nigeria in 1986 after a series of communications, visits and talks between E.C.W.A( Evangelical Church Winning All formerly Evangelical Churches of West Africa) and ACE USA and ACE Australia. There was a promise of assistance in terms of personnel, material and finance to get the ministry on its feet. Through the efforts of Rev. & Mrs. Gray, missionaries sent from Australia in 1989, who was the first Coordinator of the Ministry. The Grays were able between 1989 and 1995 to establish about sixty schools most of them ECWA church schools.
The work has currently grown beyond ECWA to become an interdenominational entity and from sixty schools to over 345 registered Schools and Home Schools across the country and beyond (Archives ACE Ministries, 2009).

1.1.3.1 Principles of the ACE Curriculum (ACE, 2001)
The ACE is built on Five Laws of Learning which are:

A child must be at a level where he can perform. One of the distinguishing features of the ACE is its insistence on diagnosis. Diagnostic tests are given to all students before they are placed in the program. This ensures that a child is not placed by chronological age expectations but on the actual performance level of the child. This procedure helps ease student’s minds and places no unnecessary performance strain on the child.

He must have reasonable goals.
Goal setting is explained and taught to students very early in the program and forms one of the vital daily activities in the Learning Centre. After the Pre-school and Learning to read classes, where lock-step pages are dictated for children to write on their Goal cards, children are expected to determine how much work they can reasonably do while being guided by minimum pages of 4 pages per PACE to a maximum of the next score strip before a checkup (a score strip is a cartoon strip at the end of a particular sub-topic where the children are instructed to score (mark) their work).

His learning must be controlled and motivated.
The ACE has a carrot and stick analogy, where a donkey is motivated to work under a controlled environment while being motivated to do so. In a typical Learning Centre, there are rules to be followed and a set of merits and demerits that help motivate children to adhere to the rules. Merits are usually redeemable at the end of the month in what is known as a ‘merit shop’ and demerits, depending on the number per day could send a child to the Principals office for a ‘spanking’.

His learning must be measurable.
Measurement in the ACE has three levels. The first level is the Check-up, the students are given a more less open book test on small parts of the PACE. There are four or more
check-ups in a PACE. The second level is the Self-Test, this is a test the students take at the end of the PACE. It is usually drawn from questions already asked in the check-ups. The performance of a student in this test informs the supervisor of the learner’s readiness to take the final test. This test is known as the PACE test. This test is usually detached from the PACEs when they are handed to the student unlike the other two. The performance in this test signals the student’s readiness to move on to a higher PACE. The student is expected to have no less that 88% in the lower grades and 90% in the high school grades to move on. In the event of failure, the student is required to repeat the PACE until a pass mark is achieved.

_His learning must be rewarded._

During the morning activities in the Learning Centre, the supervisor hands out Congratulation certificates to all those who wrote and passed a PACE test the previous day. The students are also given stars to place on their star charts in their offices. The stars are color coded according to the PACE completed. There is a golden star for those who score 100% in PACE tests. There are other forms of rewards such as Honor rolls, 1000’s club, and Privilege lists.

1.1.3.2 **Individualization in the ACE curriculum.** (ACE.2001)

Several aspects of the program bear testimony to the claim on Individualization. Such aspects include:

**Methodology:** the methodology employed by the ACE program is theistic, self-paced, motivated, individualized, learner centered and prepared. This represents all activities that relate to both teaching and learning.

_Theistic-_ the program prides itself on its desire to focus the children’s minds on God as source and end of all things. The motto of the Ministry is ‘Reaching the World for Christ, one Child at a time’.

_Self-Paced:_ this means that the children are not lock-stepped in the classroom. The program proprietors recognize the uniqueness of every child in ability. Therefore, each child sets achievable goals based on their ability. The progress of the child depends, not on the chronological age or grade level, but, on the individual capability shown to progress.
Learner-centered: the focus is not on what the teacher does to effect learning but on how much the learner is able to extract truth from what is presented in the PACEs.

Motivated: there is a strong emphasis on motivation in the ACE program. The supervisor is charged with the responsibility to motivate the children and also help them develop self-motivation. Through the use of merits and demerits the supervisor can affirm good behavior and achievement and discourage unpleasant behavior.

On close study, the ACE curriculum in its use of individualized instruction can be said to manipulate only the pace of study or learning. In that the material is constant and already prepared without input by neither supervisor nor the learner. This is in contrast to programs like the Differentiated Instruction which manipulates both pace and method. It pertinent to mention that the ACE curriculum being primarily theistic in its philosophical underpinnings, also holds to the principles of mastery learning (ACE 2001:3).

Resources- The kind of resources provided by the program are already prepared unlike the National Curriculum where the teacher is required to break down the scheme of work, the ACE has manuals for each class. These manuals include:

Procedures manuals 1 and 2, which details all learning center procedures. All activities from arrival to dismissal are outlined there for the supervisor.

The ABC’s of ACE Reading Readiness (RR) preschool with Ace and Christi, this is a manual that outlines to the supervisor the organization and teaching of the alphabet sounds to K3, K4 and K5 children. This manual is also accompanied by audio tapes, animal picture cards for each sound and assessment record cards for each child.

ABC with Ace and Christ learning to read (grade one), this manual instructs the supervisor on the arrangement, class activities, stories, memory verses and more in the first grade. The children are taught to blend the sounds they learnt in the RR class in order to begin reading. This manual is also accompanied by audio tapes and sound animal cards.
Enrichment manual, this manual outlines all motivational strategies the program employs. It clearly shows the supervisor for what and when is a merit or demerit to be given.

Furniture manual, this is the manual that details the furniture requirements of the learning center. It gives precise suggestions on how to organize and design a Learning Centre.

PACES: as explained above, is a unit of instruction material. Each student at least 20 PACES a term. They have been formed in a way that the slowest student spends no more than 2 weeks on a unit doing 4pages per day. Since the students set their goals according to their ability, some finish as fast as 4days depending on their grade level. The number of pages in a PACE is set according to the level.

Computer and audio assisted programs: There are several computer programs developed by the ACE to improve instruction. Such programs include the ABC’s and Pre-school audio tapes for teaching correct phonic sounds of the alphabets to both pre-school and grade one pupils, Readmaster, for improving reading speed and proficiency, Typemaster for teaching typing skills, Science videos for teaching and demonstrating science laboratory practicals.

Classroom—the conventional classroom is set up in such a way that is conducive for teaching, but the ACE Learning Centre is set up so that learning activities can be carried out with the minimum of interference with each pupils work. The usual design of the learning centre is round or rectangular, the offices for each child is placed along the walls of the classroom with the Supervisor’s table in the middle (without a chair), the testing table and the scoring tables are placed in the middle on both sides of the supervisor’s table.

Teacher’s Role—the role of the Supervisor is that of monitoring and assisting the students in their work. The supervisor guides a student to find answers in his/her PACE.

Assessment: as discussed in section 1.1.3.1, the process of evaluation of learning in the ACE takes three levels, this gives the students an opportunity to test and re-test as they prepare for a new level of instruction.
1.2 The research problem
Having looked at the Nigerian setting and its preferred method of lecture teaching, coupled with other serious administrative problems as shown in Section 1.1.1 above, ACE provides an alternative with a learner centered methodology, the research problem was:

How does ACE use Individualized Instruction in its Curriculum?
The more pointed questions were:
What is the nature of Individualized Instruction in the ACE Curriculum?
What are the objectives of the ACE program that shows its Individualized nature?
What content and strategies are used to achieve the objectives of the program?
What is the impact of the program as perceived by the students and teachers?
What are the perceived strengths and weaknesses of the program?
How does ACE address some of the Nigerian educational issues?

1.3 Aim of the study
This research aims at evaluating Individualized Instruction as used in the ACE curriculum.
The research is a ‘phenomenological research’ and as such explores the ACE program with the aim of exploring in depth the experience of those who have used it and thereby gain better insight to its nature, impact, strengths and weaknesses. It would be interesting for further studies to look into its relevance or otherwise in providing an alternative school system for Nigerian children.

1.4 Motivation for the study
The researcher has been involved in the use of the ACE curriculum for twelve years, having gone through the Supervisors and Administrators Trainings, first as a home-schooling mother using the program to teach my son to read and then as a Proprietor/Head Teacher of a Primary School in a rural area of Jos, Plateau State of Nigeria.

The success recorded, both for the young children and the adults (who had dropped out of school at grade six or earlier and could not read) on whom the program was used, was so impressive despite the limited resources of the school given its remote location.
The school, after three years, could present four of its older students for the First School Leaving Examination and it had a hundred percent pass.

The school experienced a sharp increase in enrollment after the third year because the community could see the impact of the program on the learners (they had been very skeptical and the opening enrollment was five including my two children) and the difference noticed in the children in terms of confidence, ability to read and understand, and the students general interest in learning. These results were compared to learners in the Public School and another Private school in the area (Shaba, 2006).

The difference in performance was a continual concern which brought about an increase in the request for enrollment at the School and we could no longer admit learners and many parents had to look for alternatives for their children.

The conclusion I came to was that the content of learning was not the problem though the presentation was different (textbooks versus PACEs), the real problem among other factors was the method of instruction. The fact that a lot of the students were not yet ready for the level of information being given to them as a result of learning gaps allowed by mass promotions.

This is the basis for evaluating Individualized Instruction on which the ACE Curriculum prides itself, to learn what the experiences of students and teachers are within the program. The study will also, hopefully, provide a basis for further studies on how Individualized instruction can be used on a wider scale in Nigerian schools.

1.5 Limitations of the study
Several studies focusing on various aspects have been done on the ACE (Delaney 1981, Fleming, et.al. 1987, Smallbones, 1988, Van Niekerk 1998, Vorster, 2001). This research was mainly on the aspect of the Individualized nature of the program.

This dissertation has focused mainly on students in grades 7-11. This is because of their ability to both write and verbally express their experience with the ACE program over a longer period. 4 students were chosen to participate in an in-depth interview, while a
Further three, who have only experienced the home school, were required to write a naïve sketch of their own experiences.

Three teachers, with long experience with the program, were also interviewed as they are integral to the success of any teaching-learning experience.

The choice of the school Faith Christian Academy was made on account of the fact that it is a model school where all ACE procedures are followed and properly documented.

1.6 Definition of key concepts

1.6.1 Individualized Instruction

Altman (1971) describes Individualized Instruction as “the way a teacher arranges children, equipment and materials so that each child can learn eagerly at the peak of his potential without stress or strain”. He also says that it is “an instructional system where the characteristics of each student play a major part in the selection of objectives, material, procedures and time. It is achieved when the decisions about the objectives and how to achieve them are based on the individual student.

Salsar (2001) defines it as “a method of managing the instructional process without requiring live lectures from teachers.”

“An approach to instruction where the traits of the individual learner are given more consideration.” (Gale Encyclopedia of Education).

1.6.2 ACE: Accelerated Christian Education

This is a program of instruction that is based on the principles of Mastery Learning, Programmed Instruction, and Individualized learning. The program has been credited with success in some respects and discredited in some. For instance, in the study conducted by Delaney (1981), it was concluded that there was no significant difference in terms of achievement between students using the ACE curriculum and students attending public schools in America.
1.7 Dissertation outline.

1.7.1 Chapter One
In chapter 1 the aim of the research discussed in section 1.3, was to explore the Individualized nature, impact, strengths and weaknesses with the view of answering the problem posed in section 1.2 which is ‘how does ACE use Individualized Instruction in its curriculum?

1.7.2 Chapter Two
Chapter 2 was devoted to establishing a theoretical base for the ACE program. Other Individualized learning methods which bore some similarity to the ACE were also explored such as Personalized Instruction, Mastery Learning and Programmed Instruction

1.7.3 Chapter Three
Chapter 3 gave a clear description of the research methodology, Sampling technique, methods of data collection and analysis. Issues of validity, reliability, triangulation and ethics were also discussed.

1.7.4 Chapter Four
In Chapter 4 the findings of the research were presented. The data was collected through the use of Interviews, Document analysis and observation

1.7.5 Chapter Five
Chapter 5, which is the last chapter of the research concentrated on discussing the findings, making recommendations for further study and forming a conclusion to this research.

Summary
In this chapter the background of the research was offered in the study of both the Nigerian education system and the ACE program. Individualized instruction was also examined in terms of structure and procedures. The aim of the study and the research questions were clearly stated as well. In the next chapter a foundation in terms of related
theories and methodologies will be established for the ACE program as well, in a small way, the Nigerian system.
CHAPTER TWO
LITERATURE REVIEW

Introduction
This chapter will focus on examining relevant literature which will assist in assessing Individualized Instruction as used in the Accelerated Christian Education (ACE) curriculum with a view to see whether it can proffer a solution to some of the problems of the Nigerian education.

The review of literature will focus on the following:
• Examining learning theories and pedagogy.
• Exploring philosophies of education.
• Examining the framework and philosophy of the Nigerian educational system.
• Examining ACE as an education system.

Having established the aims of this research as trying to evaluate Individualized Instruction in order to form a theoretical base for this study, the Constructivist and Behavioral Learning Theories will be examined with the aim of determining the theoretical framework on which the ACE Curriculum is based. The first section will examine Programs associated with Individualized Instruction in order to find similar and parallel methods with the ACE curriculum, while the second section will examine the Nigerian system in terms of its challenges.

2.1 Theories of Learning
Two major theories of learning will be examined in this section: the Constructivist theory and the Behaviorist theories. These theories have relevance to this study in that both the ACE curriculum and the Nigerian education reflect parts of these theories in its curriculum and instruction practices.

2.1.1 Constructivist theory of learning
The theory of Constructivism is based on observation and scientific studies on learning proposed by Jean Piaget, Vygotsky, Bruner and Dewey. It is now known as Progressive Education. These authors state that the learner is not a “clean slate” but one who has a previous knowledge on which he can build more knowledge on. Constructivists believe
that the learner should be involved in the learning process through group interactions, in
a friendly environment with the teacher as a facilitator in the learning process through
the use of various teaching methods that is representative of the needs of the learners
(Thirteen ed. Online nd.).

Piaget’s and Vygotsky’s theories differ in that one is in reverse of the other. Piaget
believes that Personal experience comes before environmental influence. In other words
internal logic and individual abilities affect people’s response to environmental stimuli.
On the other hand, Vygotsky believes that a person draws form the environmental
influences to form personal experience, that is, people internalize culture (Ozer, 2004).

Constructivists also believe that learning is a personal process in which each individual
forms principles and make conclusions based on their perception of their experiences
(Mayer 2008). The knowledge that each learner begins the lessons with will form the
bases of their interpretation of and application of the lesson (Snowman and Mccown
2009). They therefore believe that if five learners go through the same experience the
result will show five different perceptions and reaction to the experience.

Constructivism is basically a process of learning and reflection. The student learns and
is required to reflect on the experience and how it helps them learn. This process makes
the student an active participator in his education rather than a passive receptor. Also
known as self-regulated learning, ‘the learner generates and controls thoughts, feelings,
and action in an effort to achieve a learning goal’ (Snowman and Mccown, 2009). These
students have the knowledge of effective learning strategies and how to use them (Slavin, 2009).

There are three variants of the constructivist theories, the Cognitive, Social and Critical
Constructivism.

Cognitive constructivism is based on Piaget’s (1953) theory of developmental stages.
He portends that the ability of children to process information and draw personal
references is based on the child’s developmental stage. He says that children go through
three processes as they learn, these are assimilation – the ability to take in new
information, accommodation – the ability of the learner with guidance to effectively
process information and blend it into existing schemes and develop new schemes and
operations, and equilibration – this is the stage where learners adjust to the new schemes developed through the processing of new information (Wadsworth cited in Powell and Kallina, 2009).

Social constructivism is mainly based on Lev Vygotsky’s believe that students learn through ‘social interaction and personal critical thinking process’ (Powell and Kallina, 2009). Although collaboration, cooperation and social interaction are an integral part of social constructivist theory, the teacher should be aware of the diversity in the class and incorporate it in the class activities (Woolfolk, 2004 in Powell and Kalina, 2009).

Vygotsky, 1978 outlines three major themes of this theory:
- Social interaction is very vital to in a child’s cognitive development. He believed that social interaction precedes development.
- The More Knowledgeable Other (MKO). The MKO refers to anyone who has better knowledge or higher ability than the learner. Such can be the teacher, older adult, trainer, or even a peer or computers.
- The Zone of Proximal Development (ZPD). This refers to the gap between the student’s ability to perform under supervision or with peer collaboration and the ability of the teacher to solve problems independently. Vygotsky believes that learning takes place in this zone.

In his work, Vygotsky expressed that people in trying to understand and relate within their environments, use speech, writing and other cultural tools. He believes that although these tools are initially used by children for the purpose of communication, it later forms the bases for higher critical thinking skills.

Critical constructivism incorporates the Social constructivist view in that it assess why learners from certain social groups or cultures are able to construct knowledge in school environments more than others and also to facilitate the learning of students who experience difficulty in school environment so that all students can successfully construct knowledge (Snowman and Mccowan, 2009).

2.1.1.1 Criticisms of the theory
Critics of constructivism have commented on its elitist nature. Critics say it is only effective for students from affluent home environments and outstanding teachers. To
this Hirsch (1996) says it is not the affluence of the parents that make constructivist learning work but the commitment of the parents and the smartness of the student to be involved in discovery learning.

Another criticism that constructivism faces is that, the diversity in thoughts makes constructivist learning very subjective whereas quantifiable results are expected. In other words, it is difficult to get quantified responses if each student responds according to their perception (Thirteen ed. Online)

2.1.2 Behaviorist theory of learning
This theory also known as Objectivist Method bases its tenets on facts and quantifiable data. Knowledge is not seen as teacher dependent and is free of contextual meaning. The proponents of this theory are John B. Watson in the early 20th century, Skinner (1936), and Pavlov (1903), Bandura (1963), Thurndike (1905), Hull (1943).

Behaviourists believe that people are born ‘blank’ and that behavior is learnt from the environment through a stimulus – response interaction. They explain behavior in terms of the stimuli from the environment that caused the response and the previous experience that made the person to behave in that way. Classical Conditioning and Operant Conditioning and Social learning theory also known as Observational Learning, are the three processes used in explaining how learning takes place (Sammons, 2011; Bandura, 1986). Sammons further states that the behaviorist approach is deterministic in that it believes that behavior is completely and exclusively dependent on the environment and prior learning. Bandura believes that the greatest arbiter of behavior change is “the actions of others” (Bandura, 1986, p.45).

Classical conditioning is learning that is based on association. Papalia, Feldman, and Olds (2007), describes Classical conditioning as an association of one stimulus that produces a response and another that does not. Developed from the work of Pavlov, which was based on a process of presenting a stimulus to elicit a desired response, classical conditioning is a means of helping students learn new desirable behavior or unlearn undesirable behavior.
The process of conditioning is such that an unconditioned stimulus will produce an unconditioned response, whereas a conditioned stimulus associated with an unconditioned stimulus will produce a conditioned response.

Operant conditioning is based on the work of Thordike’s Law of Effects. Morris and Mastio, (2001) states the Law of Effects as “Behavior that brings about a satisfying effect (reinforcement) is apt to be performed again, whereas behavior that brings about negative effect (punishment) is apt to be suppressed.” There are both positive and negative reinforcement and punishment. Although reinforcements are more effective and produce results when administered immediately after a desired action, the response does not tend to be permanent, this brought about the development of the reinforcement schedule. There are the fixed-ratio schedule, variable-ratio schedule, fixed-interval schedule, and the variable-interval schedule. These schedule outlines when a behavior is to be reinforced.

Social learning theory, the work of Albert Bandura(1989), can also be described as modeling, shaping and cueing. Bandura posits that modeling is at the base of child behaviors. He says that children normally behave after a pattern they have previously observed. In order to shape a child’s behavior a system of reinforcements must be put in place to ensure that children are rewarded and encouraged to imbibe positively acceptable behavior. Cueing is in fact a matter of providing prompters for children as to when a behavior is acceptable.

Behavioral changes can be ensured through the use of the following components:
- The teacher should clearly state expected results. This includes targeted areas needing change and the measurement of success or otherwise.
- Creating a healthy and conducive environment for change to take place.
- Recognizing and employing both intrinsic and extrinsic rewards.
- Continuous reinforcement of desirable behavior until a pattern is formed.
- Reducing the frequency of reinforcement once behavior pattern is established and becomes almost natural.
- Evaluate and assess the results based on initial expectations and student response to the methods used. (Standridge, 2002)
2.1.2.1 Classroom applications of the theory

The following can be deduced as methods by which teachers can use behaviorism principles in the classroom. A number of them are used in the ACE Learning Centre.

- Use various types of reinforcements in the class such as teacher approval, concrete reinforcement (the ACE uses Merits which are redeemable at the end of each term in the Merit Shop), and Privileges.
- Be more cognizant of and reward positive behaviors and achievement than negative behaviors. Punishment is the last resort for a supervisor, it is taught and emphasized in training that supervisors must be motivators by rewarding good behaviors and performance.
- Be consistent in rewards and punishment. Consistency is one of the character traits of the ACE promotes and considers desirable in both student and staff.
- Be sure to tell the student which behavior is being punished. The ACE encourages punishment to be carried out only after the child has been counseled and prayed with.
- Use attractive environment and learning aids.
- Make the students aware of classroom rules and consequences of breaking them.
- The teacher must be a model of positive behaviors.
- Set high-achievers and positively behaved students as class models. This is the idea behind privileges and 100’s club, 1000’s club for high achievers scoring 100s in PACE tests. (Papalia, et.al. 2007, Standridge 2002, and Bandura 1989).

2.2 Teaching and Learning Methodologies

In the use of the traditional lecture method of instruction it was observed by Salser (2011) that at least 80% of the time and effort of the teacher is concentrated on the lesson preparation, note making etc. and that only about 10% retention of content learned can be expected of the learner. There has been a consistent demand for a change in the method of transfer of knowledge and this has brought about the development of various programs which take the Individualized approach to teaching and learning such as Personalized Instruction, Mastery Learning and Programmed Instruction (Gale Encyclopedia of Education).

Individualized instruction has been observed to relate with the theory of Constructivism by Jean Piaget (1958). He states that the learner is not a “clean slate” but one who has a
previous knowledge on which he can build more knowledge on. The constructivists believe that the learner should be involved in the learning process through group interactions, in a friendly environment with the teacher as a facilitator in the learning process.

The learner is expected to be responsible for learning, being an active participant in the learning process, thereby able to express what they understand and bring out their personal opinion on the subject of study. This implies that unlike the traditional method that believes the learner must be a recipient, the learner is actually a contributor to the content, method, evaluation, and outcome of learning.

Several approaches have been developed on Individualized Instruction. Each of these approaches seeks to manipulate three major variables: *Pace* – the amount of time given for mastery of content. *Method* – this refers to the model of instruction. *Content* – the material to be learned. Of the three the one not likely to be varied in any approach of individualized instruction is the content (Oliver, 1999).

### 2.2.1 Personalized System of Instruction

One of the oldest approaches to Individualized Instruction is the Personalized System of Instruction (PSI) also known as the Keller Plan proposed by Fred S. Keller in 1974. His system was built on earlier models of personalized instruction such as the one developed by Mary Ward in 1912.

Keefe and Jenkins (2002), describes personalized instruction and learning as

> “the effort on the part of a school to organize the learning environment to take into account individual student characteristics and needs and to make use of flexible instructional practices.” (p. 440)

They further state that personalized instruction is ‘systematic in organization and more authentic in its goals and strategies’.

PSI will be looked at from several angles. Such angles include Classroom activities, Teacher’s role, Resources, Assessment, Curriculum.
2.2.1.1 Curriculum

- *Diagnosis of Students* - The first thing to do in making a system of education truly personalized is to investigate the nature of the learners. Diagnosis delves into the cognitive, affective, and psychomotor development of the learner. This form of diagnosis will enable the teacher and education administrators to plan educational activities that suit each learner’s particular learning history, style, and needs (Keefe and Jenkins, 2002).

- *Mastery Learning* – this requires the student to be subjected to a series of tests, success is then rewarded and errors result in a remedial program which removes the stigma of failure. Grades are therefore not used for ranking, competition or comparison but as a tool for encouraging achievement (Grant & Spencer, 2003). Alignment, checking for understanding, active participation, self-evaluation, and high levels of thinking are constant components of mastery learning.

- *Self-pacing* – this is an essential feature of the program as ‘achievement cannot be commanded and individual differences cannot be denied (Keller & Sherman, 1974). Unlike the lock-step method, PSI takes individual differences into consideration in the rate at which material is learnt. This means that there will be no penalty for the student who requires more time to learn (Grant and Spencer, 2003).

- *Stress on the written word* – materials are presented logically and precisely. A study guide which may contain study objectives, focus questions and the instructors comment is provided (Oliver, 1999).

- *Flexible schedule* - The educational philosophy of a school is shown through its schedule. To develop a more personalized schedule, two variables need to be considered. Firstly, both the teacher and the learners are to be allowed involvement in the planning of school time and time allotment to subjects. Since lessons are to be personalized, each student with the aid of the teacher should determine how much time to be allotted each subject according to ability. In other words a child who is good in mathematics may need less time to complete a unit of work, but may need more time in science. Secondly, assessment of achievement should be based on individual performance (Keefe and Jenkins, 2002)
2.2.1.2 Teacher’s role

- *Use of Proctors* – these proctors could be students or professional tutors whose function is to assist students, perform administrative roles of providing feedback on tests and keep student records (Oliver, 1999). These could be either internal proctors that is, enrolled students in the course who have passed earlier units, or external proctors who are former students receiving credits for proctoring a course (Grant and Spencer, 2003).

- *The use of lectures to motivate rather than to supply essential information* – the teacher’s major role is to provide material and be available to assist the students (Keller and Sherman, 1974). Grant and Spencer (2003) note that PSI is an evolving data-driven system, not an ideological model. It therefore will change with the introduction of new data.

- Keefe and Jenkins, (2002) give teachers a dual role. *Teacher-coach* - They believe that the teacher is essentially a catalyst in the process of education. As an athletic or soccer coach will device training times and content, so the teacher must be the provider of study content and moderate time usage. The teacher considers the social, cognitive and problem-solving needs of the students and facilitates learning in such a way that the student locates resources and uses them to acquire suitable skills.

  The second view is *Teacher-advisor* - the teacher serves as an advisor to students either in a group or individually to help them make choices or decisions about appropriate careers, personal and social goals. Also they help students adjust to school and in personalizing instruction (.

2.2.1.3 Classroom activities

*Size* – The size of the class in a personalized setting should reflect the purpose of the class. It is important to realize that mostly, personalized learning is better done in small groups as this makes it possible to interact and collaborate, it also makes the teacher more impactful.

*Thoughtful classroom arrangement* - The layout of the classroom must reflect its personalized nature. It is arranged with discussion and group activities in mind with students sitting in well organized and positioned groups. Interaction which is directed at problem solving, information processing, and discovery of facts and reason are encouraged. The students are also expected to use precise and thoughtful language and
instruction is built around thought provoking questions relating to the students areas of interest (Beyer in Keefe and Jenkins 2002).

Enhanced learning- Kovalik and Olsen (cited in Keefe and Jenkins 2002), suggest that content and context of learning need to challenge the learner to dig for meaning. They also believe that in a personalized classroom, instruction should draw on the learner’s previous knowledge and assist in the learner make personal meaning with the use of multilayered abilities.

Authenticity in learning experience- For learning to productive and effective, the learner needs to be ‘engaged’. For the learner to be ‘engaged’, he needs to be able to make meaning of the learning experience. For the student to find learning meaningful, learning must be ‘authentic’. Authenticity is important in personalized instruction, therefore, must be tailored towards: *construction of knowledge, mastery, and value that outlives the classroom* (Newmann, Secada, and Wehlage cited in Keefe and Jenkins, 2002).

2.2.1.4 Assessment

Assessment in personalized instruction is more than mere testing or grading but includes activities such as projects, demonstrations, book reports, oral presentations, performances, competitions, and problem-solving. Three types of authentic assessment have been identified:

Naturalistic assessment which is what occurs when a teacher observes learners during learning activities taking record of things like interaction, participation in group activities, team spirit and so on.

Another type is performance assessment which involves observing and certifying learner’s competency in specific areas. These areas may include ability to follow instruction for projects, using computer prompts to learn concepts, science experiments, learning languages.

The last type of authentic assessment is portfolio assessment this involves students personal judgment on their performance. Stemming from such fields like art, architecture and designing, the students pick and compile for assessment what they believe to be a collection of their best works. They also provide a brief description of why they believe this to be so (Keefe and Jenkins, 2002).
2.2.2 Mastery learning

Mastery learning is Learner-centered and is based on Bloom’s ‘Learning for Mastery Model’. Bloom set out to explore the reason behind the divergence in learning outcomes, he discovered that although there are variances in learning rates, they all learn well if the conditions of time and appropriate learning conditions are conducive (Bloom, 1974).

Bloom in a bid to explore the practicability of his theory, observed the traditional process of learning which begins with the teacher breaking up study units – teaching – assessment with a view to grading and ranking. The assessment forms the end of the unit without a re-visit time for those who did not perform well thereby creating learning gaps (Guskey, 2009).

Bloom’s Mastery learning, (Bloom, 1971) was derived from an outline of instructional strategy that included elements of one-on-one teaching and the modification of the purpose of assessment. He believed that assessment should not be used as a closing for instruction on a unit but along-side instruction to provide instant feedback for both teacher and student and also to create avenues further explanations for those who did not perform well in the initial assessment (Guskey, 2009).

Guskey, 2007 outlines the process of mastery learning as: students learn material, they are tested, correctives are assigned based on test, and then students are re-tested to show progress.

Figure 1. The Mastery Learning Instructional Process. BY GGS INFORMATION SERVICES, CENGAGE LEARNING, GALE. In Guskey, 2009.
Bloom developed a process of instruction which is shown in figure 2. The process begins with the presentation of a study unit by the teacher after which assessment quiz or test is given based on the learning goals. This assessment is called a formative assessment with the aim of providing feedback for the students rather than closure of instruction. This swiftly followed by “correctives” which are individualized and focus on providing additional information for students on specific areas of their need (Guskey, 2009).

2.2.2.1 Formative Assessment

Black and William, 2010, discussing on formative assessment state that it is an effective tool in raising the achievement of students if teachers use the information gathered otherwise, it is useless. Popham, 2006, opines that part of the benefit of formative assessment is the incorporation of students in the learning process. The first formative test in the process provides feedback to the students about how they rate in relation to set goals. This then used to assign corrective activities. The second assessment is a motivator for students because it gives a second chance at success and helps the teacher establish the efficacy of the correctives (Guskey, 2007).

Wiliam and Leahy, 2007 believe that the value of formative assessment is weighed by the extent to which the information derived is actual feedback and if it is used to improve performance. Shepard, 2008 adds that the result of a formative assessment is useful for “forming new learning” (p.281).

2.2.2.2 Correctives

In the process of mastery learning, after formative assessment has been administered, correctives are given to those who show that they have not mastered the unit of study. Bloom, 1968 believed that organizing small study groups meeting out of class to discuss the formative assessment with a view to assist each other in weak areas, was an appropriate corrective measure. He although recommended other forms of correctives that could be employed such as: prescription of alternate textbooks, workbooks, programmed texts, audio-visual aids and rereading the original instructional material.
Guskey, 1997, proposed three important features of corrective activities: *Correctives must be provided in a different format to that which was initially presented.* This will help eliminate boredom which may result from studying the same material or being tutored in the same way by the same person a second time. The change of format in instructing correctives will also provide students with a variety of perspectives and sensory usage in the understanding of the unit of study. *Students must have various ways of involvement in the learning process.* Appealing to the different learning patterns of the learners and presentation variety will call for a number of hands on correctives such as laboratories, computer activities, learning kits, and cooperative teams. *Provide students with successful learning.* Bloom, 1968 believes that given time and appropriate instruction every learner is able to achieve success. On this premise it would be the aim of any corrective activity to ensure success in the subsequent formative assessment.

### 2.2.2.3 Enrichment Activities

Since it is most likely that some of the learners will perform well at the first assessment, thus showing they have achieved mastery of the unit taught, there is the need for the teacher to provide them with activities that will broaden their learning and further challenge them. These activities are typically chosen by the learners to ensure involvement and interest. Such activities may include, academic games, reports, special projects, and a variety of complex problem solving tasks (Bloom, 1974).

### 2.2.3 Programmed Instruction

Programmed Instruction is a technology made popular by the behaviorist B.F. Skinner in the 1950’s. Generally, it is believed that the pioneer of programmed instruction and learning machines was Sydney and Presley in the 1920’s. Molenda, (2008), posited that Programmed Instruction aimed at freeing learners and teachers from the misery of the lock-step group lecture method.

Denga (2001) says, it is a controlled sequence of self-instruction which is designed to lead a learner to a set of desired learning outcomes. The materials to be learned are specially ordered, to facilitate self-instruction in accordance with individual readings, learning rate and intellectual capabilities.
Programmed Instruction, in the words of Orlich, Harrder, Callahan and Gibson, (2001) is a teaching technique that provides learners with “small, discrete increments of instruction plus immediate reinforcement for correct responses”. The curricular material is arranged in such a way that a pupil can proceed in a gradual progression from simple to complex areas without any guidance from human intervention and receive immediate feedback on responses.

Programmed instruction is a method of presenting new subject matters to students in a graded sequence of controlled steps. Students work through the programmed material by themselves at their own speed and after each step test their comprehension by answering an examination question or filling in a diagram. They are then immediately shown the correct answer or given additional information. Computers and other types of teaching machines are often used to present the material, although books may also be used. (The Columbia Encyclopedia, 2001: 05)

There are two basic types of programmed instruction: Linear and Branched or Intrinsic programs. Linear program, developed by B.F. Skinner, provides information in small steps known as frames. Frames are small coherent and meaningful units, each of which contains:

(i) Information or directives
(ii) Devices to elicit response
(iii) Feedback to confirm or deny the student’s response or direct him to a remedial frame or to lead him to a frame in the main sequence. The frames are presented in such a way that the response of a student will determine his progress in the sequence of events throughout the program. At each step the student’s response or reaction must be overt; either in the form of writing something, turning to a designed page or pushing in a button (Denga, 2001). Shaik, (2013) explains linear programming as one that follows a ‘principle of bytes of learning-learner response-self pacing and knowledge of results.

Branching/Intrinsic Programming on the other hand was developed by Norman Crowder. This form of programming involves the student in deductive activities where the answers are arrived at by association of facts. The principles of intrinsic programming follow a pattern of ‘exposition, diagnosis and remediation’. This means that a student is first exposed to the full content to be studied, students are expected to
respond and then diagnosis of error or weakness can be made from the response and finally students are directed to remedial information to improve learning (Shaik, 2013).

2.3 Exploring Philosophies of Education

The last section has dealt with different teaching methods and one wonders why such variations in teaching methods and styles? The answer is in the philosophy of education which is being applied in such country, school, or classroom. Educational philosophers have come up with several philosophies over time but in this work attention will be given to five prominent ones which are Perennialism/liberalism, Idealism/Behaviorism, Realism/Progressive, Experimentalism/Humanistic, Existentialism/Radicalism. Another categorization of philosophy of learning will be teacher-centered versus learner-centered. The philosophy upheld by a school or teacher is reflected in the form of learning activities that takes place in the classroom.

*Perennialism/Liberalism* has proponents such as Plato, Socrates, Aristotle, Aquinas Adler, Friedenberg, Kallen, Van Doren. It is deemed the most traditional of the five. Perennialists view the world as centered on reason and God. Sadker and Zittleman (n.d.) says the perennialists education is geared towards developing the mind of the learner through ‘rational, disciplined thinking’. ‘Philosophies’(n.d.) states that the perennialists see ‘education as a preparation for life’. As such the student is exposed to those subjects that are important for living. In other words learning is directed to a specific goal. They also adhere to strict development of the intellectual, moral and spiritual aspects of the learner’s life.

The role of the teacher is that of authority, directs the learning process by such methods as lecture, study groups and discussion. The student is deemed as a receptor of knowledge who seeks theoretical understanding. ‘Philosophies of Adult Education’ (n.d.)

*The idealists* believe that the role of education is to promote behavioral change. Through the works of psychologists like Ivan Pavlov (1848-1936) and John Watson (1878-1958), behaviorists believe that man is shaped by environment and observed behavior is a reaction and reflection of the environment. Paris, (n.d)

For education to be deemed successful by the idealist, the following must take hold:
- The student maintains a passive, non-participatory role, listening to and memorizing facts provided by the teacher.
- Consistence in school program and class environment is vital. Change is considered intrusive.
- Teachers are to be models of ideal behavior, provide learning environment that elicits desired behavior. ‘Philosophies’ (n.d)

**Realists** believe education should be a continuous lifelong learning experience which encompasses the home, school and workplace. John Dewey (1859-1952) is the patron of this philosophical position. Dewey believed that people learn better when the subject is relevant to them and through active interacting with things and other people. He believed that when a student experiences what is being taught, assimilation can be achieved faster. Paris, N.D (n.d.)
The progressive student is at best passive and is expected to attain mastery of concepts taught. The teacher organizes educational experiences and guides the students in observing and studying the subject at hand. Change in the course of study is highly welcomed as the learning experience is expected to be as natural as possible.
‘Philosophies of Adult Education’. (n.d.)

**Humanists** believe that education should be directed at developing the individual abilities and self-actualization. Truth is subjective in that it depends on individual experience of a situation.
The teacher in the humanistic classroom acts as aid and consultant. The teacher does not interfere in the learning process as such could inhibit self-expression and discovery in the student. The student is encouraged to inquire and discover the world around them.
‘Philosophies’ (n.d)

**Existentialists** focus on the individual. Students are encouraged to see themselves as unique and to take ‘responsibility for their thoughts, feelings and actions’. They are given choices and allowed to take their own direction as far as the subject matter is concerned.
Learning is self-paced and therefore the teacher is to be available for consulting and guidance. The teacher exposes the student to different career options, ideas and vocation possibilities but the ultimate decision lies with the student. Paris.,(n.d.).

**Teacher-centered versus Learner-centered Approaches to learning**

The debate for or against these philosophies have gone on a long time. We consider them in the light that the Nigerian education is basically teacher-centered while the ACE is learner-centered.

**Table 1. Comparison between Teacher-centered and Learner-centered approaches**

<table>
<thead>
<tr>
<th>Components</th>
<th>Teacher-centered approach</th>
<th>Learner-centered approach</th>
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<tbody>
<tr>
<td><strong>Curriculum</strong></td>
<td>Emphasizes acquiring Knowledge outside the context in which it will be used. Emphasis on the right answer. Encourages competitiveness. Courses are prepared and focused on single discipline.</td>
<td>Cohesive program with systematically created opportunities to synthesize, practice, and develop increasingly complex ideas, skills and values. Emphasis is on using and communicating knowledge effectively to address enduring and emerging issues and problems in real-life situations. Emphasis on generating better questions and learning from errors. Encourages cooperation, collaboration and supportiveness.</td>
</tr>
<tr>
<td>Role of the Teacher</td>
<td>Present information as well as possible.</td>
<td>The teacher coaches and facilitates.</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Cover the syllabus</td>
<td>The student learns how to use and integrate knowledge in complex problem solving.</td>
</tr>
</tbody>
</table>

| The role of students | Listeners, readers, and independent learners in competition for grades. Students are passive receptors of information. | Learners construct knowledge by integration of previous and new knowledge. Learning is both cognitively and socially relevant. Students actively involved in learning activities. |

| Classroom activities | Only students are learners. Teaching-Learning activities are carried out through lecture, assignment, and exams which are summative in nature. | Teachers and learners learn together. Teaching-learning methodologies employed include: active learning, formative assignments, collaborative learning, community service learning, cooperative learning, problem-based learning. |

| Assessment procedures | Teaching and assessing are separate. Assessment is used to monitor learning. Desired learning is assessed through the use of objectively scored tests. | Teaching and assessing are intertwined. Assessment is used to promote and diagnose learning. Desired learning is assessed directly through papers. |
Having examined all these philosophies of education, although not exhaustive, one can then venture to look at the philosophies guiding the Nigerian education and the ACE programs.

### 2.4 The Framework and Philosophy of the Nigerian Education

The framework of the Nigerian education system rests mainly on reactions against the meager provisions in the British education system and its inability to meet the cultural, environmental and economic needs of the country (Nwangwu, 2003). These reactions were the bases for the convening of the National conference on curriculum development in 1969. The conference was given the mandate to fashion out a philosophy for Nigerian education, the result of the conference was the first National Policy on Education (NPE) in 1977.

The philosophy of Nigerian education is derived from the five national goals of Nigeria. The NPE (2004), in its opening paragraph states that ‘no policy on education, however, can be formulated without first identifying the overall philosophy and goals of the nation’.

The overall philosophy of Nigeria is to:

(a) Live in unity and harmony as one indivisible, indissoluble, democratic and sovereign nation founded on principles of freedom, equality and justice;

(b) Promote inter-African solidarity and world peace through understanding.

(Section 2,NPE 2004)

The five main National goals of Nigeria (section 3, NPE 2004) are to build:
(a) A free and democratic society;
(b) A just and egalitarian society;
(c) A united, strong and self-reliant nation;
(d) A great and dynamic economy;
(e) A land full of bright opportunities for all citizens.

Section 5 of the NPE states that Nigeria’s philosophy of education is based on:
(a) The development of individual into a sound and effective citizen
(b) The full integration of the individual into the community; and
(c) The provision of equal access to educational opportunities for all citizens of the
country at the primary, secondary and tertiary levels both inside and outside the formal
school system.

The National Policy on Education is curiously devoid of a clear statement of what
exactly the philosophy of education is for Nigeria. There are various allusions to its
existence but no single section nor paragraph stating what it really is.

This has given rise to a number of criticisms such as the one by Fadahunsi (2008) who
says the National Policy on Education is just a ‘volume show-casing government’s way
of achieving parts of our national objectives through education.’ He further opines that a
philosophy can only be built on a decided societal ideology. Dewey stressed that
education is a social function, and that until we know what sort of society is best
desirable, we do not know what sort of education is best
He is of the opinion that Nigeria as at this time has no concrete or general ideology
which is evinced in the implementation of different laws in the country depending on
whether you are in the North or the South. In the North it is more a religious ideology
while in the South there is a more secular ideology in place. There is therefore no
singular ideology for the whole and therefore there cannot be a singular philosophy of
education since the philosophy of education is tailored to realizing the set ideology.

Another critic, Nduka (2006), claims that even though Nigeria has an underlying social
ideology stated in its National goals, there is a contradiction in theory and practice. He
states that it is not possible to build a just and egalitarian society in a capitalist
economy. He posits that if Nigeria does not decide on its social ideology, it will be difficult to achieve a consistent and coherent philosophy of education.

In conclusion, from the brief study done above it can be suggested that the philosophy of the Nigerian education system is:

*Perennialist in nature.* The perennialists believe that education is a preparation for life. They point out that since the outstanding feature if man is the ability to reason, development of rationality should be the educational focus. Methodology relied on lectures, expecting the learner to listen, memorize, and recite under the moral authority of the teacher (Maheshwari, 2011). This is representative of the experience of the Nigerian student.

*Teacher centered.* Basically, the method of teaching is teacher-centered. The perennialist teacher is a disciplinarian with ability to use logical reasoning and able to impart the same to the learners. The teacher concentrates in teaching the basics of reading, writing, and arithmetic. In a typical Nigerian classroom, the teacher decides what to learn, even though there is a syllabus, most only teach what they can. He also decides when to learn, how learning must take place, and when the learner has achieved the learning objectives. So much power is given to the teacher over the student that curiosity, initiative and self-motivation in the academic work is seen as rebellion against the teacher’s authority (Maheshwari, 2011).

2.5 Accelerated Christian Education

2.5.1 ACE in Nigeria

The Accelerated Christian Education has common features with the methodologies which have been examined above. The extent of such similarities or differences will be the focus of this section.

The Accelerated Christian Education (ACE) Curriculum has been in existence for more than four decades. Dr. Donald Howard began the program in 1970 in Garland, Texas. It has been tested and tried in many countries, Nigeria inclusive. Many parents have found it an alternative to the regular school system which is riddled with constant strike actions, inadequately trained teachers, lack of adequate learning materials and study aids and have taken advantage of the Home School provision. Many schools are also using the program either exclusively or along- side the National Curriculum.
ACE started in Nigeria through the efforts of Rev. Grey in 1984. He was the first Coordinator of the Ministry that found shelter under the wings of Evangelical Church Winning All formerly Evangelical Churches of West Africa. The work started by convincing people to try Home Schooling for their children using the program. The initial attraction was that it was the first truly Christian Curriculum available. The work has currently now grown from few Home Schools to over 345 registered Schools and more than a hundred Home Schools across the country and beyond (Archives ACE Ministries Nigeria).

2.5.2 Framework and Philosophy of the ACE Curriculum (ACE, 2011).

From these it is possible to infer that the ACE philosophy can be called ‘eclectic’ at best. In its theistic principles it has a close relationship with the Perennialist’s. ACE declares that it is ‘unapologetically Biblical’ in its philosophy. The ACE founders say “we desire to build in students a life-long burning passion to learn and grow spiritually” (ACE Publication, 2009).

In terms of the role of the teacher and the perceived role of the student, there is a close kinship with the Existentialists and Humanists. The role of the supervisor is to provide guidance and consultative services at the request of the student. This is believed to assist children develop self-reliance and self-expression.

Students in the ACE are expected to be responsible for their learning and actions. This is built through the use of merits, to encourage achievement and character development, and demerits to discourage violations of rules.

The ACE philosophy can be said to be a mix of the Perennialism, Existentialism, and Humanism. On a basic level ACE can also be classified as Christian Education in its philosophy and underpinnings.

ACE has distinguished itself in being learner centered, although there is no evidence of collaboration between the students, it however is based solidly on mastery of learning.
2.5.3 ACE program under scrutiny

The vision of the ACE is captured in this phrase ‘educating the World one child at a time’. The objective is to create an environment where each individual child is able to learn at his/her own pace, at his/her own academic competence level without putting pressure on them to perform to routine timing.

The ACE is based on the principles of mastery, discipline and Godly Character building. To achieve this, the teacher – learner ratio is 1:10

From pre-school to Grade 12, the ACE curriculum is a self-pacing, Biblical based program with students working through a prescribed number of PACEs (Packet of Accelerated Christian Education), and a series of assessments that encourage and test content mastery. (ACE Ministries, online, 1-22)

The involvement of the Parents is highly emphasized. Therefore, Parent Orientations are regularly organized. Teachers (known as Supervisors) go through training, and re-training to help them keep abreast of current developments in the Ministry and Education in general.

2.5.3.1 Curriculum

The curriculum of the ACE is aimed at helping each child achieve mastery in all subjects. Designed to meet different levels of abilities, the curriculum is multi-tracked with students mastering objectives in order before moving to the next level.

From pre-school to Grade 12, the ACE curriculum is made up of over 800 PACEs in the core curriculum (English, Mathematics, Science, Social studies and Word Building) which is excluding additional enhancement subjects. Each subject has 12 PACEs per grade level, each of which is equivalent to three weeks’ worth of study material.

Although originally written the United States of America, ACE Ministries International has given ACE Ministries (Africa and Scandinavia) the permission to produce and distribute materials suitable for the countries which they oversee. For example, ACE Nigeria was given permission in 2007 to produce black and white PACEs in Nigeria to reduce the high cost of importing PACEs from South Africa and make it easier for schools located in rural areas to use the program without making education too
expensive for the people. In 2009, the Ministry was given the permission to look into making the ACE curriculum conform to the National Curriculum. (ACE Nigeria, 2011)

The secondary curriculum is divided into the General Education and Training phase (GET) and the Further Education and Training phase (FET). In the GET phase, the core curriculum includes subjects like Mathematics, English, Social Studies, Science, Word Building and Etymology (Word Study), and Literature. The FET phase is made up of additional and elective subjects which are added to the core subjects for High School graduation. These subjects are Biblical Studies, Economics, Accounting, e.t.c

Although the ACE certificate is yet to be recognized by the Ministry of Education, graduates are allowed to join their counterparts in taking the West African Secondary Certificate Examinations. The ACE certificate is however recognized in countries like UK, USA, Australia, and South Africa.

The ACE curriculum distinguishes itself in a number of areas: (ACE publication, 2009)
- Places the child at exact academic ability through diagnostic testing.
- Incorporates goal setting, Godly character building, and Biblical principles.
- Utilizes multimedia and computer technology.
- Offers a superb education that is affordable.
- Encourages parental involvement.
- Stresses uniqueness of individual.
- Produces academic excellence.

2.5.3.2 Classroom activities

The ACE is built on Five Laws of Learning, they are:
- A child must be at a level where he can perform.
- He must have reasonable goals.
- His learning must be controlled and he must be motivated.
- His learning must be measurable.
- His learning must be rewarded (ACE, 2001: 49-50)
Level of Learning (ACE, 2001: 53ff)
The first law states that the pupil must be on a level of curriculum where he can perform. This especially important given that the ACE material is individualized in nature and requires that a student be able to work about 70% independently. Therefore, ‘diagnosis’, which is the testing by which a student’s achievement levels are determined, is very important.

Except for learners who enroll at the pre-school level, all students are tested through ‘diagnostic tests’ set per subject (mathematics, English, etc.). As placement is not by the chronological age but by the performance level, Children may start at different levels on the core subjects in order to eliminate learning gaps. This helps the supervisor determine the strong and weak areas of the student and help the student set appropriate goals that will address both areas with the view of achieving academic balance.

Diagnostic testing is the very heart of the ACE program. This feature helps eliminate learning gaps, transfer issues and other problems that affect student’s progress.

Setting appropriate goals (ACE, 2001:79ff)
Setting appropriate goals begin with students knowing what is expected of them both academically and extra-curricular. The Supervisor helps each child identify their strong and weak subjects in order to assign appropriate time to each task to ensure academic balance. Goal setting ensures that students do not spend time doing only subjects that interest them but also subjects they may be having problems with.

At the beginning and end of each school day, learners are subjected to a period of ‘goal checking’ where the supervisor assign home work for work not finished during the day, and stars, commendations and awards of privileges’ for achievement.

Goal setting also include allocating time for such activities as:

- Opening exercises
- Devotions/ Chapel hour
- Reading literature passages/ Oral reports
- Breaks
- Field trips
Taking Tests
Using the computer for Typing lessons and Reading Proficiencies
Physical exercise
Attending group classes (these are subjects for which there are no PACEs but required by Education Boards).

*Control and Motivation (ACE, 2001:103 - 115)*

*Discipline*
The Biblical bases for discipline within the ACE program are as follows:

- Chasten thy son while there is hope, and let not thy soul spare for his crying. Proverbs 19:18.
- Train up thy child in the way he should go: and when he is old, he will not depart from it. Proverbs 22:6.
- The rod and reproof give wisdom: but a child left to himself bringeth his mother to shame (Proverbs, 29:15).
- Correct thy son, and he shall give thee rest: yea, he shall give delight unto thy soul (Proverbs, 29:17).

Training children involves establishing boundaries and helping them take responsibility for their actions and learning. Discipline does not have to be unpleasant; it should be an activity or action that is done lovingly with the aim of producing achievement.

*Motivation*
The ACE puts such measures in place in the use of merits, demerits and privileges. Merits are positive incentives awarded for good behavior or academic achievement. Demerits on the other hand, are given when infractions are committed to a level of crossing boundaries.

*Rewards (ACE, 2001: 105)*

Based on the principle that every action brings a corresponding result, the ACE has built into its operation a system of reward for student diligence and hard work. Both tangible rewards such as: stars of different colors and significance for academic achievement, privileges, field trips, congratulation slips, 100’s and 1000’s club recognition and trophies, and intangible rewards such as: praise, encouragement even comfort and reassurance are instruments used regularly in a typical ACE learning center.
2.5.3.3 Assessment of learning (ACE, 2001: 91)

Three levels of tests are set up in each PACE, Checkup, Self Test, PACE Test. The Checkup is set for the student to test mastery in segments of the PACE. The Self-Test set at the end of the PACE, also helps the student to test overall mastery. In each of these, the student is expected to score no less that 80% to be able to do the PACE test, which is the supervisor’s tool of measuring performance, to decide readiness for promotion.

Apart from these internal tests, the ACE encourages schools to enroll their learners for other standardized tests, such as: Common Entrance Examinations, etc. This will enable schools to measure student achievement by a larger population and aid improvement where necessary and confidence all around.

**Checkups**

A checkup which is given after completion of a unit of instruction, may be done at school or home. The student is encouraged to answer as many of the questions he/she can without referring to the text. Corrections are done for missed answers and references are written. The student scores the checkups and uses it to assess the level of accomplishing the section goals.

**Self-Tests**

At the end of each PACE, there is the Self Test which should be done only after the supervisor has checked to ensure that all work has been done, checkups scored and corrections done. The student scores the test and is expected to have made a 90 percent passing score. If the student scores 70 or less he /she is required to review the whole PACE again and retake the Self-Test.

**PACE Tests**

After a student has successfully completed the Self-Test with the appropriate passing scores, he/she may now take the PACE Test which is an assessment of complete comprehension of the material. The student is required to have no less than an 80 percent score. If the test score is lower than 80, the student is expected to repeat the PACE. The supervisor scores and discusses the test result with the student to determine reason for failure.
2.5.3.4 The role of the teacher in the ACE

The teacher in the ACE is called a supervisor. His or her role includes:

- Conducting Morning exercises i.e. Devotions, Goal checking, Attendance taking, handing out congratulation slips.
- Motivating and encouraging students to achieve goals.
- Marking PACE tests and awarding stars for performance.
- Listening to students readings.
- Guiding students in bringing meaning to their materials

It is evident in this list that actual instruction giving is not really a part of the ACE supervisors’ responsibilities. The supervisor is cast in the role of a monitor or teacher’s assistant where the responsibilities are mainly administrative in nature.

The supervisor is to set the atmosphere in the classroom and is trained to pray for the students, offer a smile on receiving the children and maintain a generally peaceful and happy environment for them to work in.

The role of the teacher in the ACE curriculum is one of the basic areas of criticism of the program. It has been identified by previous studies that the system is focused on individualized methods that are student focused rather than teacher motivated.

Kelley (2005), criticizing the ACE on teacher recruitment, says that the ACE curriculum allows for uncertified and under-trained teachers, stating further that the ACE justifies this action by stating that the curriculum is self-instructional, and therefore, students do not need certified teachers as they are taught by the PACEs.

Although this happens in many schools, especially in Nigeria where most of the schools area in the rural communities, it is not an ACE subscribed notion.

The ACE policy, as stated in (ACE, 2001: 123) requires the employment of a professionally qualified person in the field of education to head a school. Apart from this, the supervisor/teacher in-charge of the learning center must be a qualified professional for 30 to 50 pupils assisted by one or two paraprofessional monitors. The
ratio is one supervisor to ten pupils, one supervisor and one monitor to 30 pupils, one supervisor and two monitors to 31 to 50 pupils. These supervisors and monitors must also have gone through the monitors training, which is an intensive course to prepare them for the demands of the learning center. So, although the monitors may not have an education background, the supervisors are expected to have training in education.

2.5.4 Success claims of the ACE
In order to have sound bases for comparison and assessment it is necessary to look at what the developers of the program intended from the beginning.

2.5.4.1 Godly Character Training (ACE, 2001:2-6)
One of the basic aims of the program is to provide continuous opportunities for the pupils to have character training. As such the students are exposed to this in the following ways:

- The 60 character traits. These are intended to be a yard stick to measure character both in students, teachers and parents. Each PACE contains a section, on the first page, where a short poem is written on one of these character traits.
- The program includes a time of devotion in the morning called ‘opening exercise’, where teaching is provided on the life of Jesus and memorization/recitation of monthly scripture are used to focus the mind of the students on Godly living.

2.5.4.2 Individualized Instruction
The ACE lays claim to being individualized in nature in that the student’s progress is not dependent on chronological age or grade advancement but on individual achievement of academic goals. The student is not seen as part of a group to be kept going together rather as an individual to be allowed to go at a pace convenient and adequate for him/her to achieve the same goals but at different times.

The method of individualization in the ACE makes the problem of learning gaps non-existent. Since a child cannot progress without getting a passing score, the possibility of a learning gap is eliminated.
The progress of each child is dependent on the skills acquired since the ACE curriculum is designed as a step-by-step, skill on skill process. The more skills the student acquires, the higher he/she progresses.

Development of critical thinking skills as found in Bloom’s Taxonomy – Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation – is an integral part of the ACE program as it leads the learner through the stages of critical thinking.

The learning to read program of the ACE has been found to enable students learn to read much faster than the regular reading routines. With the use of letter sounds arranged in such a way that consonants and vowels can easily be blended to form words as early as in the first two lessons and each letter has an animal story and song to make recollection easy and interesting. In the researcher’s experience, both young children, adult learners and all levels of learners benefit immensely from the program. Even though the program is lock-stepped learners who may have difficulty in blending are allowed to work at their own pace in reading.

**SUMMARY**

This section has surveyed some teaching-learning theories and programs, the ACE program was also assessed with the aim of answering the research questions on the strategies and methods of Individualized Instruction as well as the impact of the program. The next chapter discusses the research methodology.
CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION
Chapter one gave a solid foundation and background for this dissertation. The aim of this study is to evaluate Individualized Instruction as used in the Accelerated Christian Education curriculum.

In Chapter Two a detailed and broad study was conducted on the various teaching methods directly and remotely related to Individualized Instruction.

• Examining learning theories and pedagogy.
• Exploring philosophies of education.
• Examining the framework and philosophy of the Nigerian educational system.
• Examining ACE as an education system.

This chapter will be concerned with the research design, methodology, sample selection, data collection, data analysis and interpretation. Issues of validity and reliability of data collected, triangulation and all ethical issues will be considered.

3.2 Research approach
3.2.1 Qualitative Research
Qualitative research has been defined variously by many scholars. Donley (2012) differentiates qualitative research from quantitative research in terms of the later looking at the answers to certain questions and the former looking at the reasons for those answers. She clarifies that qualitative research, goes further than enquiry into the numerical account of people, things, places, situations or events. It seeks to understand the purpose behind actions and attitudes in order to give better insight into behaviors. This will involve basically interacting with the people who are involved in the situation under investigation.

Cresswell (1994), for instance defined qualitative research as “an inquiry process of understanding based on distinct methodological traditions of inquiry that explores a
social or human problem. The researcher builds a complex, holistic picture, analyzes words, reports detailed views of informants and conducts the study in a natural setting”.

Leedy (2010) believes that ‘qualitative research is to be used when, little information exists on a topic, when variables are unknown or when a relevant theory base is inadequate or missing. In this light a researchers’ ability to interpret and make sense of what he or she observes is critical for understanding any social phenomenon’.

Bryman (2008) says that qualitative research is a research method that usually places premium on words rather than numerical quantification in the collection and analysis of data. This implies that qualitative research places emphasis on understanding through looking closely at people, words, actions and records. It examines patterns of meaning which emerge from data and these are often presented in the participants ‘own words’.

Kielborn (2001) describes qualitative research as ‘an umbrella’ under which several forms of enquiry, such as Interpretive research, Field study, Ethnography, etc., finds coverage.

The goal of qualitative research is to discover which patterns emerge after observation, careful documentation, and thoughtful analysis of the research topic. The inferences from qualitative research are not sweeping generalizations but contextual findings. This is a fundamental and basic basis for qualitative research.

The researcher chose this method because it gives the best avenue to participants to freely and completely express themselves and the researcher as a narrator can give voice to the issues they address.

In order to establish this research as a truly qualitative research, the characteristics are examined with pointers on the aspects of the research that fit into these qualities.
3.2.2 Characteristics of a good Qualitative Research

Figure 2. Adapted from the National Institute of Health and Clinical Excellence, (2009: 15-19).

From these characteristics, it was made clear, that the research was better conducted as a qualitative research since the purpose is not to generalize the findings nor is it to be applied to a larger community of learners. Although, experiences of other learners within the ACE, may likely be similar to all the ones shared by the participants of this research.
Researchers have identified five basic types of Qualitative Research, namely, Case Study/Idiographic Research, Ethnography, Phenomenology, Narrative/Grounded Theory and Historical/Biography Research. The next section will examine phenomenology as the research design for this study.

3.3 Research Design

The philosopher Husserl (1859-1938) is the founding father of phenomenology. Husserl’s (1936) ‘life world’ is a very important aspect of phenomenological research. Finlay (2008) says that life world which is the concept of ‘intentionality’, is an issue of ‘consciousness of something’ and how the individual relates to it. In other words, phenomenology focuses on ‘the intentional relationship between the person and the meanings of the things they the experience’.

Phenomenology is an approach that is concerned with life experiences. Phenomenology concerns itself with unprocessed information usually received first hand, on how an event is experienced and interpreted by those involved (Denscombe, 2003)

Phenomenology is a method of learning by listening to a person’s account of their peculiar experiences. The researcher must remove his own preconceptions of the subject and perceive the issue at hand from the description of the subject.

This approach to qualitative research was chosen because Individualized instruction, particularly in the ACE curriculum is a phenomenon. This approach is deemed appropriate for the topic because the aim is to find out how learners and teachers in the ACE system experience Individualized instruction in the curriculum

3.4 Sampling

There are two broad parts to sampling, namely, nonprobability sampling and probability sampling. Probability sampling involves random selection of subjects. Researchers generally believe random sampling is more intensive and ‘accurate’ (Trochim (2006). Purposive sampling according to Given (2008) is a deliberate ‘choice’ of the participant(s), the location and the methodology used in carrying out a research. She further inferred that sampling strategies are chosen based on the context and the objectives of the research which shows that there is no sampling strategy that is better
than the other. This means that the researcher decides on the objectives and then selects people who are both able and agree to provide the information (Bernard, 2002).

The purposive approach to sampling was employed in this research since the participants must be involved in the ACE for them to experience the phenomenon under study. The approach was deemed the most suitable not only because ACE is used by a relatively small part of the whole population of students in Plateau state Nigeria but also because the participants cannot all be accessed at any one given time because of location and the grade levels available in most schools.

Length of time in the use of the program is paramount because the longer a student has been with the program, the more the weaknesses and strengths therein are stressed and redefined for the student and Supervisors.

Although originally the data was intended to be taken from grade 9-12, the researcher discovered that most schools using the ACE curriculum had students only up to grade 9. This is because the certificate of the ACE is not yet recognised by the Nigerian Government for entry into universities, therefore, most parents send their children to the conventional schools for the last three years of secondary education. (Interview with ACE Nigeria’s Schools Coordinator).

Although there were 15 students in grade 7-9, the issue of longevity with the program disqualified some leaving only 7. Interviews were conducted with four students (2 male and 2 female) which lasted for about twenty minutes each. It is important to note that the interviews were conducted in a classroom prepared for the purpose and voice recorded. The assurance of absolute anonymity and the absence of any of the school staff gave the students the opportunity to express themselves freely especially when asked about the teachers.

There were also three teachers interviewed, chosen with the length and extent of their involvement with the program in mind. It was as a result of their inability to answer some of the questions and some of the responses that necessitated the interview with the coordinator of schools.
Three other participants were included in order to provide document analysis in aid of triangulation and validity. These three wrote their experience from the perspective of the home school because they had been home schooled before joining Faith Christian Academy.

The researcher also took time to observe the classroom interactions without creating a distraction. This also with the researchers own knowledge of learning center procedures formed field notes to be analyzed along with the rest of the data.

3.5 Instruments of data collection

There are various instruments of data collection available to the qualitative researcher, namely, in-depth interviews, non-participant observation, focus groups and document analysis.

The methodology employed in the research leaned heavily on interviews while some of the participants were asked to write ‘naïve sketches’ of their experiences. It required in-depth individual interviews of some current students on their experiences with the ACE curriculum.

3.5.1 In-depth Interview

Qualitative interviews are not always as structured as the quantitative ones. The researcher used guiding questions that allowed for clarifications of unclear responses or deeper queries into raised issues not on the interviewers notes (Donley, 2012).

Before the interviews, each of the participants was appreciated for their willingness to participate. They were made aware of that the purpose of the research was academic and that their response will help others understand the concept of individualized instruction in the ACE program and also generally help others view the program with a clearer perspective since it is actual experiences that will be shared. They were also made aware of their right to decline participation.

The questions of the interview were open-ended in such a way that the participants were allowed to fully share their experience and guiding questions asked to shed further light on grey areas. Two separate set of questions was prepared for the interviews, one for the students and for the supervisors.
The interviews were conducted and recorded with the aid of a voice recorder. The participants were encouraged not to be intimidated by the recording and assured that they would have access to both recording and the transcribed notes before they are used in the research.

3.5.2 Document Analysis
Documents such as the Procedures manual 1 and 2 (2001) was reviewed to assess documented objectives, curriculum, classroom activities, and success claims of the program. Also included in this document, are the perceived strengths and weaknesses of the program.

Naïve sketches were also written by three students who had only experienced the home school setting. This essay like presentations, of the participant’s experiences with the ACE program, was analyzed and themes coded.

3.5.3 Observation
Mayoux ,(n..d) outlines the uses of observation in qualitative research as:

- Getting a better understanding of context. Qualitative research deals mainly in the reality of the participants therefore an idea of the context in which the participants operate is very pertinent.
- Cross-checking information and finding out possible differences between what people do and what they say they do. In the interest of ensuring reliability of the data gathered, triangulation is required and one of the ways to triangulate is method triangulation. Using various methods will establish the truth of the responses of the participants.
- Gaining new insights or to discover things that people have not revealed during interview.
- Building rapport with participants. In the course of the research, a good rapport will help create confidence and produce better and more accurate responses in participants.
3.6 Validity and Reliability

Silverman (2006) believes that validity and reliability are crucial in determining the ‘credibility’ of any qualitative research. Guion, Diehl and McDonald (2011) explained that validity is concerned with accuracy of the research findings and if the data gathered is wholly represented in the research findings.

Davies and Dodd (2002) prefer to call it ‘rigor’. They argue that although there are quantitative elements in rigor, the application of subjectivity as it allows the free flow of expression by the participants, reflexivity as it takes cognizance of the observation of the researcher and reflections of the participants, and the social interaction of interviewing as it reflects the ease of discussion between the participants and the researcher, will give a qualitative flavor.

Lincoln and Guba (1985), posits that reliability and viability are more quantitatively measured and therefore not appropriate for qualitative research. They say rather that the issue should be that of ‘trustworthiness’. Mishler (2000) is also of the opinion that to establish truth, reliability and validity should be replaced by ‘trustworthiness’.

Finlay 2006 (cited in Finlay n.d) provides a checklist for evaluating validity and reliability in a good qualitative research. She presents what she calls the 4Cs.

**Clarity** – This refers to how precise and accurate the researcher is in the presentation of the research findings. The research findings were presented in the words of the participants. The responses of the participants went through three phases of sifting, prioritizing and organizing which was handled by the researcher and two analysts who helped with the data.

**Credibility**- Are the researcher’s conclusions clear to infer from the data by anyone? Is it clear why the researcher came to such conclusions? From my point of view, I believe having gone through the data collected, the conclusions are quite clear and easily drawn.

**Contribution**- How will the findings enhance perceptions of social conditions, increase knowledge of a phenomenon, or open the opportunity for further studies? The findings help to clarify misconceptions of people about the ACE individualized system of
instruction. It explained why and how the system operates. It also examined the strengths and weaknesses of the program.

The research also sheds light on the advantages of Individualized instruction over the Traditional method of teaching used in Nigerian schools.

The research opens an opportunity for further studies in that it does not evaluate the program as a whole. Another opportunity for further studies is to find out the level of academic achievement of ACE students when compared with their counterparts in the conventional Nigerian system.

*Communicative resonance* – Does the research findings reflect a true and compelling picture of reality? Every aspect of Individualization in the ACE program was evaluated and the responses of the participants on each aspect presented in the research.

The issue of validity and reliability in this research will be seen clearly in chapter 4 when the data is analyzed.

### 3.7 Triangulation

Triangulation is described by Bogdan and Biklen (2006) as a process of confirming the validity of data by using several sources simultaneously. It is in fact the use of different methods to study a phenomenon.

Altritchter et.al. (2008) posits that the employment of triangulation in research will give a clear and well-rounded view of a phenomenon. Triangulation is used to ensure validity in qualitative research (Guion, et al, 2011).

Denzin (1978) puts forward four basic types of triangulation:

- *Data triangulation* which involves collecting data by different methods on different people at different times.

- *Investigator triangulation:* this means the involvement of other researchers in the processing of the data.

- *Theory triangulation* suggests the use of several theories in the interpretation of the collected data.

- *Methodological triangulation* refers to the use of several methods to gather data.
Mathison, 1988 points out that triangulation is a test that improves the reliability and validity of a research. Patton, 2002 clearly states that by combining methods in data collection, a study is strengthened.

The use of triangulation is beneficial for creating depth in a qualitative research. It gives deeper insight to a phenomenon, provides variety in the understanding of a problem, and helps in crediting or discrediting a theory (Thurmond, 2001 cited in Guion et. Al, 2011).

In this research, the researcher attempted to triangulate the data by the use of methodological triangulation. There was the use of in-depth interviews, non-participant Observation, Naïve sketches and document verification.

3.8 Ethical Issues
Holloway and Jefferson (2000) say that in spite of the researcher’s resources and drive to do the research, the participant has the right to say ‘no’ without fear of pressure or intimidation. The researcher is ethically bound to accept the response of the participant whatever it may be.

3.8.1 Informed consent
Fitzgerald (2001), points out that informed consent is a process that requires the researcher to be open and explicit about the research and also provides the participants with the power to accept or decline to participate in the research. This implies that the participants must be adequately provided with relevant information about the purpose, scope, personal risk involved and the expectations of the researcher during data collection.

In this research the participants were given a letter for parental consent as they are minors and the school also wrote a covering letter to let parents know of their consent to conduct the research in the school. The teachers who participated were also given letters of invitation to participate. On the day the interview was conducted, the researcher also explained what the research is all about to the students and teachers. They were also given the opportunity to refuse participation.
3.8.2 Confidentiality

Confidentiality in data collection means that the researcher assures the participants of the fact that their identities will not be revealed in the research. Confidentiality also involves not revealing information that may make the identity of the participant apparent (Wiles, 2012).

The researcher made sure that apart from the principal who wrote the school letter to the parents, no other person was aware of the identities of the students involved. The teachers were also interviewed separately to avoid timidity or influence by the others. Confidentiality and anonymity were preserved through the use of the following codes:

- S1-S4 Student interview
- NS1-NS3 Students naïve sketches
- PS1- PS3 Supervisor’s interview
- H1 Interview Schools coordinator

SUMMARY

In conclusion the chapter has justified the research as qualitative in nature, explained the reason for the various methodologies employed and showed the researcher’s attention to ethical issues.

The next chapter concerned itself with reporting the responses of the participants.
CHAPTER FOUR

FINDINGS OF THE STUDY

INTRODUCTION

In chapter 3, the research methodologies were discussed. The methods of data collection, sample and issues of validity/ reliability and ethics were also dealt with. This chapter will be concerned with the analysis of data collected and discussion of findings.

4.1 Interviews

The interview questions were divided into three parts: background, experiences and perceived strengths/weakness. All the interviews began with appreciation to participants for their time and willingness to be part of the research. The respondents were assured of the confidentiality of the research and that they will have the opportunity to verify the transcripts before their responses are used in the research. They were further assured that the research is for academic purposes and will not reflect on or affect their schooling or work in anyway negative.

The following sections report the responses of the participants to the various questions.

4.1.1 Student interviews

4.1.1.1 Background

The pertinent questions in the interview schedule are:

- May I know how old you are?
- What grade are you presently in?
- Is this the only school you have attended?
- If not, may I know your reason for transfer?

Information gathered from the participants revealed that they were between the ages of 14-17. It was also revealed that two of the participants were in grade 7(P1 and P2), one on grade 9(P3), and the other in grade 8(P4). When asked of the schools they had attended, the responses were: “this is my only school”. (P3) said “I have attended other schools” (P1, P2 and P4). The reasons for transfer were varied “I did not enjoy the
school, there was a lot of bullying” (P2), “the school closed down” (P1), “my parents wanted me in an ACE school” (P4) and “I don’t know” (P3).

4.1.1.2 Individualized instruction

What is your experience with student offices?

What is your experience with scoring procedures?

How do you feel about goal setting?

What do you think about your PACEs?

P1 says “I like it because it allows me to concentrate”. P2 and P3 agree that it increases concentration but “also helps you keep your things”. P4 is of the opinion that “having an office, unlike in the conventional where you sit three on a bench, teaches you responsibility, you are responsible for your work, you can’t blame anyone”.

As part of the individualized nature of the ACE, the students are required to mark all pages of work done. Scoring procedures are outlined in Section 2. The students and Supervisors gave their opinion of the practice as follows:

P1 states that she “prefers scoring her work by myself and learns about my mistakes and corrects them”. P2 is of the opinion that “scoring teaches you to be honest”. P3 agrees that “scoring is good, I enjoy it”. P4 on the other hand says that in scoring “there is the temptation to cheat, but if the supervisors insist on following scoring procedure we can become honest and truthful. It also removes the mistakes of some teachers in marking right answers wrong. This can discourage students”.

This is one the core issues in ACE’s individualized system. Responding to the question about their experience of goal setting, P1 states “it was easy to set and I was able to achieve them”. P2 says “It makes ACE different from the conventional since I can decide on how much work I want to do, but there is a minimum page you can set”. P3 opines that “it helps you to be focused and hardworking”. P4 says “I can wake up in the morning and know what to do and this is learnt unconsciously as you set goals in the ACE. It helps you form an attitude of being orderly and focused”.

The students all agree that the PACEs are easy and full of information. P1 says “Learning with PACE makes learning easy. It is simplified without stressing us with big names and topic titles. For example, I learnt about the Pythagoras theorem known by
my friends as the ‘almighty formula without knowing it. It was my dad that saw my note and said ‘how did you find the almighty formula’ and I was surprised it was so easy because there was no scary title to it”. P2 in his own opinion says “PACEs are good, I don’t get to jump any page and there are Bible verses and character traits to help us know about God”. P3 and P4 said they enjoy PACEs.

4.1.1.3 Assessment procedures

What is your experience with check-ups, self-tests, and PACE tests?
All four participants agree that having check-ups in the PACEs helped them a lot. P1 pointed out that “to take the check-up you are allowed to look back in the PACE to help you remember what you have learnt”. P3 said it was helpful that there were several check-ups in the PACEs. P2 and P4’s response was “we enjoy it”.

After the PACE is completed, the check-ups done and reviewed, the students request to take the self-test. All the students agree that “reviewing the check-ups help you pass the self-test”. P4, however, adds that sometimes the students are too much in a hurry to finish with a pace that they don’t review and then they fail the self-test”. P3 expresses that “the self-test is brought out from the check-ups, so, if you study well the self-test is easy”.

“PACE tests are easy for me because you get to review the self-test before giving the PACE to the supervisor” (P3). P1 did not find it as easy as P3, he says it’s because “I don’t revise well before I take the PACE test”. P2 and P4 simply say “it’s easy”.

4.1.1.4 Supervisors and resources.

How do you view your supervisors?
Are there enough resources to enhance your learning environment? Are they adequate?
How are your classes arranged? Do you like it? Why?
When asked on their view about their supervisors’ P1 said “Our supervisors help us a lot since our parents attended conventional schools, they cannot help us with our PACEs like our supervisors”. P2 and P4 had issues with the attitudes of their supervisor saying “she gets upset about the slightest thing though academically, she helps us”. P3’s comment was that “they are trying”.

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On resources the students all felt they were not adequate.

- All four participants desired a separate class for the higher grades. P1: “I don’t like our class arrangement because the learning centre is made up of children from grades 2 to 9. The smaller children make a lot of noise and we need to concentrate on our work”. P2 affirms “it is noisy most of the time because some finish their work and then disturb others. It would be nice if we are separated from the junior class”. P3 mentioned the issue of sporting facilities. He said “I wish we had more sports activities like swimming and music”. P4 was concerned about Science practical. She said “right now what we do is to watch videos of science lab work and then write a lab report, but I would really like us to have a real lab and do the practicals rather than watching them”.

4.1.1.5 Relevance of ACE

Can you explain how you think your experience in this program will help you in your future academic pursuits?

What do you think needs changing in the program?

What do you think other people feel about the program?

Biblical training: P1 “…I have learnt through the PACEs about the lives of people and how they handled issues, I believe that it will help me to handle issues using God’s word”. P2 also says “I experienced Biblical teaching, memory verses and also discipline”.

Character training: P1 shared that “it has been helpful. I am made accountable for my goals, PACEs, office, cleanliness and everything, I can’t blame anybody when I do something wrong. ACE has taught me accountability and being responsible”.

Supervisors: P3 and P4 expressed concern on the pronunciation problems they encounter with the supervisors. P3 said, “Some of the teachers have a problem pronouncing words and it delays us in dictation and Word building”. P4 simply said “pronunciation of words is a big problem”.

Other people’s perception: P1 had this to say “other people say that ACE maths is slow, but we know that ACE believes in the basics and simplifying things”. P4 comments that “People believe we are not getting the best because we do not do exams, but we have not failed any exam so far”. Asking him to elaborate, he said “my parents registered me
for JSSCE in grade 9. I had 4A’s, 3B’s and 4C’s. They were happy and encouraged to let me continue ACE”.

Concluding comments: P1 and P2 said “ACE is the best”. P3 expressed with joy “I know I am in the best place”.

4.1.2 Supervisors Interview

4.1.2.1 Background

What position do you hold in the school?

May I know your teaching experience?

Why the choice to work in an ACE school?

Have you any experience of other programs?

PS1 is a male grade 2 supervisor with 7 years experience with the ACE program. He sees his job as a calling from God. “Even though I did my primary school in an ACE school, I never thought I would teach in one”. PS2 is a female learning centre supervisor with 13 years experience with the ACE program. She expressed that “I heard about the program and came for the training, I liked it and I stayed to teach”. PS3 is a female Learning-to-read class supervisor with 5 years experience with the program. She is by profession a social worker. She said “I have never taught in my life and I am a very shy person so, when I was invited to teach in the school by the then Principal. I thank God for the support she gave me by listening in to my lessons and correcting any mistakes”.

4.1.2.2 Objectives of the program

What are the objectives of the program?

PS1 believes that, the objectives of the program include:

Biblical training- “the PACEs all have scripture verses for the students and also there are monthly scriptures given”.

Character training- “there is a character trait for every PACE”. In fact there are 60 character traits that the ACE emphasizes”.

Reading: “the major attraction of the ACE program is the Learning to Read program. It always surprises people when we say that children can learn to read in 15 weeks”.

Discipline – “discipline is instilled through a set of rules, not many and considering the age and ability of the children. You cannot set the same rules for 3 year old and 10 year old children”.
PS2 in her opinion, the objective of the ACE is to “raise God-fearing, disciplined, honest and hardworking children for the future”.

PS3 states that ACE is “concerned with helping children become who God wants them to become through exposing them to the Words of God and the world around them”.

4.1.2.3 Curriculum

What does the curriculum entail?
Do you think the curriculum is in line with the needs and philosophy of the country?
Does the curriculum achieve the set objectives and principles?
Has the program ever been evaluated? If yes, what are the results and improvements made? If not, do you know why?

On the issue of curriculum each teacher was only able to talk about his/her own class. Therefore document analysis and interview with the Coordinator of Schools for ACE Nigeria were conducted.

Curriculum achievement

All participants agree that the program achieves its objectives. They stress that the program is more effectively implemented than the Nigerian curriculum. PS1 stated that, “The reason ACE is more effective than the Nigerian schools is implementation. You will see a teacher covering only half the prescribed syllabus and yet the children get promoted. The standard is not uniform.”

PS2 in her own opinion believes that ACE is better at achieving the objectives of the country because “in ACE we emphasize character, this is missing in Nigerian schools. You will see schools that bribe external invigilators to allow children cheat during exams. Our children are taught to be honest in scoring from the earliest class and we can be proud to present any of them for external examinations without the need to assist them fraudulently.”

PS3 further asserts that ACE’s reading program is one of the best in the country. She points out that “children who start ACE at the RR and Learning to read levels are always different in their confidence and even curiosity to learning.”

Curriculum evaluation

The participants all said they had no knowledge of whether the program had been evaluated or not, therefore the question was posed to the Coordinator of schools.
4.1.2.4 Classroom procedures

What is your experience with ACE classroom procedures?

Student Offices

PS1 believes that “offices are the distinguishing mark of ACE’s Individualization program where each child can work independently through a set of goals”. PS2 also addressed the issue of children daydreaming in the offices. She says “some children don’t value the offices especially the young ones, they think it is for playing so if the supervisor is not observant, they will not do any work”. PS3 believes that “the concept of the student’s offices can only work if the child is self-motivated. In answer to a request to explain more she said “if the child is not self-motivated, there is little the supervisor can do. They will just sit there and while away their time when you are attending to others”.

4.1.2.5 Scoring Procedures

Commenting on scoring procedures said “it makes our work easier since you don’t have to sit for hours after school marking”. PS2 gladly said “it’s one of the best things about the ACE; you don’t have to take work home to mark unlike the conventional system”. PS3 stated that “apart from teaching the students to be diligent while studying, it also teaches them to be honest. For me, I appreciate the procedure because I remember how tough marking homework, classwork and assignment were during our teaching practice back then”.

4.1.2.6 Goal Setting

On the issue of goal setting PS1 declares it “… another of ACE’s distinguishing marks. That a child determines how much work to do and they strive to complete it. It brings discipline”. PS2 in her own view believes that “Goal setting helps them to be committed, like one of the character traits they learn about”. PS3, on the other hand, stresses the role of the supervisor in the children learning proper goal setting habits that will last their lifetime. She insists that “for the children to get the life-long impact of goal setting the supervisor must monitor the process well daily”.
4.1.2.7 PACEs

PS1, enthusiastic about PACEs, said “it is another beautiful thing about the program. You do not, as a supervisor, need to plan the instruction it is already done for you”. PS2 pointed out that “everything is in the PACEs, it is so rich and even you as the supervisor learn a lot from them”.

4.1.2.8 Assessment Procedures

What are the program’s assessment procedures?

The supervisors were unanimous in their opinion that “the check-ups are helpful to children”.

PS1 agrees with P4 on the issue of why some students fail. He states that “in spite of all the system provides for the children to pass, you will still find some who are too lazy to follow the rules and they cannot go as fast as they should”. PS2 and PS3 believe that if the students will review the check-ups passing a self-test will be easy”.

The supervisors believe that the PACE tests are easy to pass since the students have had time to review check-ups and self-tests before the tests were written. PS2 repeated that “if students will review the check-ups and self-tests the PACE test has been made easy for them”.

4.1.2.9 Supervisor – Student relations

What is your role as a supervisor?

Is the teacher – learner ratio adequate?

PS1 said “Even though I enjoy my job, it is very tedious. The children raise their flag for assistance and because they are at different levels of work you may have to go over the same things several times. The major problem is because of the teacher pupil ratio. The program recommends 1:10 and if more the class should have a monitor, but in this school and many others there is always a shortage of staff”.

PS3 is of the opinion that the role of the supervisor especially in the foundation phase is vital. She said “…where the children learn to read, if the supervisor is not committed to proper reading skills and diction, the children become poor readers with faulty pronunciation”.

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4.1.2.10 Training

What kind of training did you receive and was it enough for your work?
Questioning the issue of training and its adequacy, PS1 responded by saying “
PS2 commenting said “I had to go through a one week intensive Supervisors training before I was allowed to teach. My certificate is only valid for 5 years then I have to go back. This training prepared me for real learning centre activities even though I believe a practical session will be needed”.

4.1.2.11 Perceived Strengths and Weaknesses

What makes the program different from others?
What would you change if you had the opportunity?
Would you recommend the program for use generally in Nigerian schools?
Why?

Biblical training: P1 states that main objective of ACE and its Motto is ‘Reaching the world for Christ one child at a time’. P3 said “the Biblical verses encourage confidence in the children”.

Character training: P1 states that “If a child is trained in his system, he will be a resourceful person, honest, and responsible in all things. They will have integrity”. P3 comments “the first grade helps them be confident and the class arrangement encourages socialization, boldness and courage. The offices help them to preserve areas of weakness from ridicule from peers”.

Supervisors: The concern here was unanimous on the issue of the teacher-learner ratio.
They all agreed that the program provided for a good Teacher-Learner ratio but that many schools do not practice it.

Other people’s perception: P2 states that “only the products of ACE can change people’s view about the program. For example my daughter is doing so well in grade 10 in a conventional school. The principal had to ask ‘which school she came from’ because she took 7 out of 11 prizes for her class this last year. They were all surprised, because she came from an ACE school which is believed to be slow”.

Concluding comments: PS2 concluded by saying “I will definitely recommend this program for all the children in Nigeria. It will help remove the problem mediocrity and cheating in our education system”. PS1 believes that if the issue of teacher-learner ratio is handled ACE will be very perfect for Nigerian schools”. PS3 on the other hand feels
that the issue of PACE order is very important for the management to handle because “it slows the children down”.

4.1.3 Schools Coordinator
The interview with the schools coordinator became necessary because none of the supervisors were able to answer questions that did not relate to classroom procedure. These questions are:

- What does the curriculum entail?
- Has the program been evaluated? If yes, what were the results and has anything changed for the better/worse? If not, do you know why?

4.1.3.1 Curriculum
On the issue of the curriculum he referred to the Procedures manuals where the curriculum is fully outlined (ACE Procedures Manual 1 and 2). The curriculum is a series of educational activities that span over the space of 12–15 years including 2 years of pre-school. He further stated that the curriculum of the ACE is based on Biblical principles such that facts in the PACEs are explained from a biblical point of view. The curriculum in the words of the Coordinator is “self-paced, Individualized and packaged”. He said that the program was developed in America, even though “the new Nigerian subjects are now being introduced, not in PACE form but in regular textbook-workbook format, in order to fit the children with knowledge that will enable them fit into the Nigerian context”.

4.1.3.2 Evaluation
The coordinator said that the program has not been evaluated in Nigeria, although it has been evaluated in other countries like the United Kingdom by NARIC (National Recognition Information Centre for the United Kingdom) in 2012. This was carried out ‘as a follow up to the benchmarking project of 2008’. The purpose ‘was to establish how the ICCE (International Certificate of Christian Education) General, Intermediate and Advanced Certificates, through its delivery in the UK, compared in terms of content, outcomes and rigor with the Ordinary, Advanced Subsidiary and Advanced level qualifications awarded by CIE (Cambridge International Examinations)’. 

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4.2 Document Analysis

4.2.1 Naïve sketches

Three students who had previously been home schooled were requested to write naïve sketches of their experiences. They were shown a copy of the interview questions to give them an idea of what the research was to evaluate. They were however not restricted in the length nor depth of their writing.

The emerging themes of the writings are as follows:

4.2.1.1 Classroom procedures

Offices

“Having offices was a special experience, even though it was a home school, we still had the offices and it was good” (NS2). “There were only two of us so we did not use offices, but my mother got us each a table, different colours, and it was very good” (NS1). NS3 said “I had an office in our garage and I liked it”.

Paces

NS1 states that “PACE work is fun. You get to read passages and answer questions. In the PACEs you also have memory verses and Character traits”. NS2 remarked that “using PACEs helped make learning easy because the things we learn are all explained very simply and anyone can understand it”. NS3 was of the opinion that check-ups, self-tests and PACE tests were “good things that were put there to help us pass very well”.

Scoring

NS1 reported that her aunt who was the supervisor of the home school scored their paces as there were no score keys. “My mom scored our PACEs (NS3). NS2 remarked that scoring was alright.

4.2.1.2 Supervisor

“One of the interesting things about home school was that my mom was my supervisor, and she was strict but kind. She would allow us to have a break or story time if we were tired or distracted” (NS2). NS1 stated that her supervisor was not so ‘strict’. NS3 on the other hand would have preferred to have another person as supervisor.
4.2.1.3 Assessment
NS1 commented that it is easy for to score 100’s in tests because the tests are always taken form the checkups and self-test she had already done. NS2 said “I know the ACE tests are easier to pass than other schools tests because of the revision you are allowed to do, but it helps to also study if you want to score 100”. NS3 equally commended the program by saying “they teach, make it easy for us to be excellent, not like other schools where a child can pass with 50%”.

4.2.1.4 Perceived strength and weakness
NS1 said she “would have loved there to be a way to meet other students doing the ACE in like sports”. NS2 believed that the ACE program, “is good and I want more children should be allowed to experience it”. NS3 in his own opinion “the program is good but I think doing it as a home school is not good, there are too many interruptions and distraction because you are at home”.

4.2.2 ACE Manual
Perceived weaknesses of ACE (ACE 2001)
The ACE identified several weaknesses pointed out by critics of the program. 
*The program must be resold.* This one of the fundamental drawbacks of a program that is not well known, the fact that its operation differs from the ‘normal’ is a road block that constantly needs crossing. In order to keep the benefits of the program alive in the minds of parents, educational administrators and such several programs are organized to showcase the program. Such programs include Parent’s orientation, banquets, graduations, staff conventions, and student’s conventions.

Parents are usually excited at the beginning when they see the children reading in a short space of time, but then the rigors of class activities set in and they ask, what grade is my child?, the answer is always lengthy because you have to explain again the issue of self-pacing and individual ability. It is very tedious and exhausting on the already challenged school administrator.

The ACE answers this by stating that the more aware a person is of a situation, the better equipped they are at handling it. So staff is repeatedly attending training to keep abreast of new developments and parents are reoriented to remind them of the values of the program.
Another perceived weakness is the issue of the pace of mathematics in the ACE program. There is the general belief that the ACE mathematics is very weak in that the children have to do higher paces in mathematics than the normal grade requires to measure to others in the conventional schools. The real issue is that of the type of curriculum format that is being used. The ACE uses a step-by-step format while the conventional syllabus follows a mixed concepts format. The step-by-step format is concerned with a gradual build in the knowledge of the children, for instance, the grade 1 and 2 maths is basically simple additions and subtraction, whereas their counterparts in the conventional are already tackling multiplication, Lowest Common Multiples and the sort. The ACE believes that if the child can build up a connection between the numerical operations, there will not be the need for memorization. Also included in this is the amount of practice that the children get on each topic treated along-side mental sum practices included in the PACEs from grade 3.

The problem availability of PACEs is another weakness. In a bid not to allow misuse and proliferation the right to print is restricted, this means that countries where printing is not allowed have to order and sometimes face delay. This delay causes obstruction in classroom activities and makes the materials more expensive. In a bid to bring the price down Nigeria was given the privilege to print black and white PACEs this colorless material is not as exciting as the colored version even though the content is the same.

Lack of socialization is another criticism of the program. The critics say that the program because of its individualized nature does not provide for collaborative learning, group discussions or any kind of interaction between the students. Although collaborative learning is not used, there are various subjects not included in the ACE curriculum and the method of teaching is left to the teachers who hand

In the light of the above complaint about the program many schools either leave the program entirely or choose to use the preschool and grade 1 curriculum while the other classes will be conventional or else they begin to misuse the program and then increase the incidences of complaints about the program.
4.3 Observations
The method of observation used was a non-participant observation. Observations took place after the interviews were conducted. The researcher observed the proceedings in the school, moving from class to class within the space of one week. The findings are as follows:

4.3.1 Classroom activities
The researcher observed that there was the use of offices in two of the learning centers and only tables and chairs in the Reading Readiness class. This difference in furniture was necessitated by the form of instruction taking place in the learning centers. The Reading readiness class is lock-stepped and therefore requires the teacher to be in close contact for story reading, sound training and co-ordination skills drills.
It was also noted that each of the learning centers were arranged in the same way, that is, the student offices were placed along the walls of the class with the scoring tables, test tables and the supervisors table in the middle and front of the class.

The learning centers were well lighted and ventilated, with colorful pictures and other informative charts. The student’s artistic works were also displayed around the classroom. Although because of the number of students in the class, the walls looked very cluttered and chaotic.

The arrangement of the class could be better for easy movement but again because of the number of students it was very clumsy. Although it is worthy of note that this in no way reflects the ACE arrangement, it refers only to a particular school situation.

4.3.2 Teacher-Student relations
In the course of the day the main learning center became noisy. It was observed that the supervisors were not in control of the class. Children walked around the class leisurely and were allowed to go to other students’ offices. The observation showed there was a teacher-learner ratio problem. The supervisors are so few that many students had to wait for quite a while before they were attended to.
Another observation was that some of the supervisors were not really giving privacy to those students who had problems by going to their offices; rather the students had to go to the supervisors tables for assistance.

The researcher noticed that even though the supervisors were very busy, they gave close attention to goal setting, scoring and testing.

4.3.3 Availability of resources

The researcher was able to observe that in this school PACEs were sufficient probably because the school is situated right next to the ACE Nigeria head office. The supervisors were seen giving out new materials to the students.

The researcher did not see the students using any other instructional material. There was a time schedule for the students to use the computer room. In the room there are three desktop computers from which the students could watch the science practical CDs. This was not enough to take care of the needs of 11 students so they have to follow a time schedule to use the computers.

There was also no evidence of the students having time for extra-curricular activities. The time table did not include any club meetings, or sports activities nor is there any indication that the children get interaction with other students from other schools (not even the ACE ones) within the school program.

4.3.4 Assessment procedures

The observation revealed that the ACE assessment procedure is very much like the Programmed instruction model of read-answer-feedback. After a small unit of the PACE has been read, the student is expected to fill in the blanks on prepared questions or extracted portions of the material.

The format of the PACE is such that the child is tested on four parts of the material with each part separated by a check-up. The check-up is much like an extraction of portions of the section written out in fill the blank format. The student is then expected to score (mark) the check-up to get feedback on level of mastery and corrections done. After the four check-ups are completed and scored, the learner is allowed time to study all the
check-ups in preparation to taking a self-test. This is a test that assesses the level of mastery of the whole PACE. This is scored as well by the student. The result gives the student and supervisor an idea of the learner’s readiness to move to a higher PACE. If the student has achieved 85% and above, he/she is allowed to go home with the PACE for further revision, if not, a new PACE is ordered of the same level and the child is required to repeat the material. The PACE then is handed in the next morning and the child takes the PACE test which marks the end of the PACE. The next morning the supervisor hands out congratulation slips and the next PACE. In the event that a child is unable to make 90% in the PACE test, he/she is required to repeat the PACE.

This process ensures that no student moves on with a learning gap. The tedious and boring prospect of repeating a PACE makes students prepare well for tests, although the amount of repetitions and reviews alone is enough to ensure success.
CHAPTER 5
DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS

5.1 Learning theories and the ACE curriculum
Following the question raised in section 1.1.1.5, Can individualized instruction be viewed as an alternative to the Lock-step traditional system?, the concept of individualized instruction was examined with attention to Curriculum, Learner’s role, Teacher’s role, Assessment procedure, classroom procedure.

In chapter 2, learning theories of behaviorism and constructivism were examined. Also examined are teaching and learning methodologies of personalized instruction, programmed learning, and mastery learning were examined in terms of their structure, and procedures. In the same vein a comparison was made between teacher centered and learner centered approaches with focus on their structure and procedures (Table 1). The aim was to provide a foundation for the ACE program and the Nigerian system.

Also in the chapter, the Individualized nature of the ACE curriculum was examined, and inferences made to its common features with the examined theories and methodologies.

5.2 Discussion of findings
The findings produced several themes. These themes which show the experiences of students and teachers will be discussed under the three headings of enquiry raised in section 1.3. These are the nature, impact and strengths/weaknesses of the program.

5.2.1 The nature of ACE Curriculum
5.2.1.1 Curriculum
PACEs
A PACE (Packet of Accelerated Christian Education), is a unit of prepared information used in the ACE curriculum. All the participants agree that the use of the PACEs is a good thing. They agreed that having information in smaller bits is better than having everything at once. It was also suggested that the PACEs does not give room to miss out on any topic as it happens in the conventional schools. Using the PACEs also provide the opportunity to learn memory verses and character traits since they are a part of the material.
The ACE participants said the passages are easy to read and the questions easy to answer since the answers were right in the PACE. The participants further appreciated the simplicity of information in the PACEs. The supervisors felt the PACEs gave an advantage on their part over teachers in the conventional school.

Considering the aim of the research in possibly using this aspect in a larger scale in the Nigerian schools, will indeed, be a lot of work although possible, it will call for commitment and dedication on the part of curriculum developers. The cost of the whole process will also be a huge deterrent to policy makers. This is so because sometimes the orders are delayed and the children are left waiting for them thereby wasting time.

The implication of that is it eventually makes the ACE program very expensive and not affordable for the lower income class of the society. The expense of setting up and running an ACE school has been an issue of discussion and a road block to the spread of ACE schools in Nigeria.

One great concern over the PACEs is the fact that they are ordered and shipped into the country from either America or South Africa. This factor commented on by one of the supervisors as needing change is a serious drawback for the program in Nigeria.

This feature of the ACE program is so like that of the Programmed instruction where the curriculum is preplanned irrespective of the student’s needs or learning type. It has been made clear that Individualized instruction seeks to manipulate three elements in the learning process: the content, process and method. ACE manipulates in its curriculum the Pace which is the process of learning, it does not diversify method according to students needs as all have to read and the content is the same for everyone.

It equally emulates the Mastery learning in its belief that eventually all students can achieve. The curriculum provides for a repeat of PACE after a student has performed below 80% in a test. Mastery in the ACE is still very narrow in that the child is not exposed to a different method of presentation nor allowed a different material. Collaboration and group activities in corrective measures are not a part of the ACE program.
5.2.1.2 Classroom Activities

*Student Offices*

A student office is a cubicle like structure where a student can do his/her classwork without interference from other students. The provision of offices is one of the unique features of the ACE’s Individualized Instruction.

The impressions of the participants on the issue of offices was quite positive, they expressed that it was an effective way of ensuring concentration, honesty and general discipline in the Learning Centre.

On the other hand, there were a few concerns raised by the Supervisors and some students. These concerns were about the need for self-motivation and proper monitoring for the idea behind the offices to be effective. The participants mentioned the case of daydreaming as a reason why the student must not only be self-motivated but also monitored.

Self-motivation is very vital for a student of ACE to develop. Since the supervisor cannot remain on one student through the day a student who would benefit from the use of offices will have to have a personal commitment to studying. Where the supervisor realizes that this is missing then measures have to be taken to encourage and build this in the student.

The seclusion of students is more a constructivist view rather than a behavioral one as the child is expected to create a personal world view and tackle problems in a way unique to him/her. According to Piaget, (1953) assimilation, accommodation, and equilibration are the process by which a learner processes information and this very dependent of the individual learner’s ability.
Goal Setting

The Participants acknowledged the role of goal setting in the ACE program. From as early as grade one, the students are assisted and expected to set reasonable goals from 4 pages as a minimum.

The students are expected to set their goals before the closing activities daily. In the morning the supervisors carry out a ‘goal check’ where each student is to show that the pages scored in the PACE corresponds with the pages done and pages remaining in the PACE.

Goal checking is a means of making sure that students realize that even though they are independent in their studying, they are accountable for it as well.

Goal setting, according to the participants, can become a lifelong habit that is passively learnt. Focus and commitment are characters that make goal setting effective.

It is also evident that the role of the supervisor is vital in ensuring that this aspect of the program is successful.

5.2.1.3 Supervisor’s role

The supervisor’s role is that of guide and monitor rather than teacher. In the ACE curriculum, the supervisor is expected to be a motivator, an encourager and a guide to the students. He/she is to help the students find the answers to their queries by asking leading questions or directing them to the page they need to consult.

The supervisor however, may be required to teach other non-ACE subjects. In the event of this, classroom paraphernalia will be utilized like the Chalkboard, Lesson notes etc. the extent to which these lessons were individualized or learner-centered was however not evaluated in this study.

The supervisor’s role in the ACE is often misunderstood by those not in the program. It always seem that the supervisor, as opposed to their counterparts in the conventional system, have less to do but it is not so. Keeping track of not less than 50 PACEs a day, giving attention to 10 or more students on 5 or more different subjects at different grade levels can be very tedious. This is why the supervisors who stay committed to the ACE see their job as a ‘calling’ from God to serve.
The role of the supervisor in the ACE program bears much resemblance to that of personalized instruction which holds a behaviorist view of the role of the teacher. Keefe and Jenkins, 2002, highlighted two roles of the teacher who wishes to personalize instruction, the role of a coach and advisor. This is in contrast to the traditional role of organizer and director of learning. The supervisor motivates, guides, advises, and ensures that each student is working at their full capacity, not above, nor below. The supervisor also makes sure the student gets feedback at the right time to ensure progress.

### 5.2.1.4 Assessment procedures

The assessment procedure of the ACE program bears likeness with the read-answer-feedback model of programmed instruction. This model requires students to work with small units of instruction at a time. After the student has read the unit, he/she is required to answer questions of fill-in or objective nature. Feedback is then given and the next unit is given.

In section 1.1.3.1 the three levels of evaluation in the ACE were discussed. The participants expressed satisfaction about the tests and believe that they form the bedrock of the success of students.

It was stressed that when students follow the guidelines, they are sure to get the desired success. The guideline is that before every check-up, review the section, before a self-test, review the check-ups and before a Pace test, review the check-ups and the self-test. It is in the experience of the researcher that when all check-ups are carefully done and corrections made, the student only need go over them to have a 100% in the self-test and PACE test.

### 5.2.1.5 Resources

Considering that the ACE curriculum is quite different from the conventional system, one would expect that the resources used will also be different. The resources available to an ACE school, includes:
Manuals

There are a number of manuals for all activities that is carried out in and out of the ACE classroom.

The Administrators manual details all administrative requirements for a successful school. It gives advice on:

Buildings- how and why of the desired shape, a sample floor plan of a typical school is included to guide proprietors.

Furniture- this includes student offices and other staff and classroom furniture. The classroom set up and furniture used by the ACE are made so as to allow a smooth flow of work in the Learning centre.

Documentation- it explains what supplies to order for students, PACEs, CD’s, star charts, goal cards, etc. it gives precise advice on the quantity and timing for such orders.

The manual also shows, as a reminder of what was learnt during training, all enrolment requirements and procedures.


This is like the ‘Bible’ of the ACE. It details all activities regarding the ACE from A-Z, from the enrolment of a child to graduation no detail is left out. This manual is for the supervisor, it allows them concentrate on what directly affects the child’s academic, spiritual and physical development. The manual is like a scheme of work and lesson note combined. The manual has sections on:

Curriculum - this section gives a detailed account of the scope and sequence of the whole curriculum form pre-school to high school.

Procedures – the five laws if learning are stressed here and the supervisor is guided on the practical applications of the laws in the learning center. This section also details appropriate reward and discipline measures.

Record keeping- one of the tedious aspects of a supervisor’s job is the amount of paper work involved in the ACE program. PACE trail monitoring, which details the movement of PACEs from the warehouse to the class, Inventory and ordering which helps the supervisor keep track of how many PACEs have been used per week and how many need to be replaced from available stock of ordered from the warehouse.

Supplementary Information- this section includes recommendations on motivation, discipline, enhancing the school, perceived strengths and weaknesses of the program, and suggestions for the expanded curriculum for high achieving students.
**ABC’s Manuals**

There are two of these the ABC’s of ACE reading readiness manual and the ABC with ACE and Christi manual. *The Reading readiness* manual consists of daily activities for the pre-school class. This includes:

*Animal stories* - the children are taught character traits through animals with names that begin with the sound being taught. For example, Ape for the a-sound and the character trait of contentment.

*Bible stories* - there are bible stories that also stress the character trait.

*Phonic sounds* - there are 36 phonic sounds in the ACE program. The pre-school curriculum is a year-long program with a sound taught every week.

*Songs* - with the knowledge that children learn in different ways there are songs for each of the animals, sounds and character traits.

*Memory verses* - scripture verses are given weekly according to the character trait being taught for the week.

*Psychomotor skills development activities.* The program designed a separate program to enable young children develop both large muscles and fine muscles that will help posture, eye-hand, eye-leg co-ordination, multi-tasking and hand writing.

The manual gives a suggested timetable of the activities to be carried out in the class with time allocation and a complete list of the things to do and the PACEs the children are to work with. During the year the children use Maths, English, Science, Social studies, and Word Building PACES RR1-RR12.

*The ABC with ACE and Christi* is the manual that takes care of the first thirteen to fifteen weeks of the grade one class. At this stage the children learn to blend the sounds they have learnt in the pre-school class to form words and sentences. This manual includes:

*Animal Stories* - These are similar to the stories in the preschool manual but with greater attention to detail to appeal to the children’s higher level of understanding and reasoning.

*Bible stories* - these are also similar to the pre-school program.

*Memory verses* - the children have Scripture verses per PACE now with an additional 8-10 verses for memory per term or semester.
Instructions on letter formation for the students – the 12 Word Building PACEs are devoted to helping the students correct any deficiency in writing, blending sounds to form words, learn sight words. After the Word Building PACEs are completed then the children begin English, Science and Social studies PACEs. The Maths PACE is done along-side the Word Building PACEs. These two classes form the bedrock of the ACE Curriculum and success, since the program depends heavily on the ability of the children to read.

AUDIO AND VISUAL MATERIALS
There are various audio and visual products that the ACE curriculum employ to assist students gain better from the program. These materials include Audio tapes and CD’s of animal songs and alphabet sounds for the pre-school and grade one class, Videos of laboratory experiments, Readmaster which helps student increase reading speed, Typemaster which teaches the students typing skills. All these features define the nature and peculiarities of the ACE program. The next section discusses the impact of the program from the findings.

In spite of this impressive list of resources, it is clear from the responses of the participants that they do not believe these are sufficient to give a broad exposure to the students. From observation, the program is very limited in variety for the students, they are very much limited to the knowledge provided for them in the PACEs.

5.2.2 IMPACT OF THE PROGRAM
The impact of the program will be examined on the premise of what the ACE intended and what is actually achieved.

The development of the Individual child to his full capacity. This is achieved by encouraging individual progress in the children, with the use of self-pacing. The initial diagnosis conducted for every student equally takes away assumption based on chronological age or class expectations.

The ACE also has a number of elective subjects in the High School curriculum that helps the children discover their areas of interest, calling and ministry. Such PACEs as Leadership PACEs, Vocational skills PACEs, Missions and others.
There is also a credit given for community works and participation this goes toward the Principal’s Honor roll.

From the responses of the participants, it is clear that the ACE is deficient in several regards. A child’s full capacity can be developed in the four walls of a classroom. This is a big problem of ACE schools, even though there is provision for sporting and other talent development programs, Nigerian children using the ACE do not have the opportunity to participate in such. This is probably a Nigerian thing because the children in the Nigerian schools are equally missing this total-child approach to education. The participants however remarked on the life-long benefits of goal setting, as they are able to apply it to several areas of their life. Some of them commented that it would help them plan their study and perform better since they have already learnt the benefit of setting goals and sticking to it till you achieve.

*Academic Excellence.* The ACE believes that children should not just ‘get by’ academically but that they should ‘get ahead’. This is what underlies the diagnostic tests that students are subjected to before enrolment. ‘For a child to ‘get ahead’, he/she must be placed in a level where he/she can perform’ is the tenet of the ACE proprietors. Learning gaps are also detected at this stage and the student is expected to do PACEs that take care of these gaps first before continuing on to normal grade level work.

In order to achieve this, the ACE curriculum’s Reading program is taken seriously. It is believed that the child who can read and comprehend will do well in the ACE. The reading program spans through two years of part lock-step part individual studies. The lock-step part involves the time when the students are taught the 35 basic sounds of the alphabets and then taught to blend them to form words. The students continue on to individual work once they are able to read.

The ACE curriculum is built on the concept of basic to complex. This is why many see the ACE mathematics as slow, students do not move on to do multiplication until they have mastered the concepts of addition and subtraction to as high as 4 digit numbers. The founder of the program asserts that “one reason students using the ACE program continue to demonstrate above-average achievement is because they take responsibility for their own learning”. This is done by teaching the children proper goal setting skills and study skills. (ACE Publication, 2009)
The participants agreed that they were getting the best education possible. They testify to the fact that they were expected and motivated to achieve mastery in their PACE work. The evidence of other researches as to the value of academic activities can attest to this. The study done by Baumgardt, 2006, shows that ACE students acquire adequate preparation for higher studies. In an ACE publication, 2009, an admissions officer at Princeton is quoted to have said of one ACE student: ” He was one of our most extraordinary applicants. He has demonstrated an amazing academic excellence… He is truly a thinker. We’ve never seen a young person like this.” One of the participants stated that it is easy to become the best academically in the ACE because there is no way to skip anything, and the pass mark is high.

Character Building. The Program believes that Godly Character is important for the success of the child. The children are taken through 60 Character traits that will guide them through life to be productive, effective and impactful. Such characters like trustworthiness, loyalty, honesty are taught as the children go through the PACE by means of cartoon strips and Bible verses. The students are encouraged to apply these character lessons to their lives and the supervisors look out for opportunities to reward and reinforce these traits in the students.

In the course of their daily activities students unconsciously imbibe characters through mere repetition of actions. For instance, setting of goals can become such an ingrained action that it is carried into everyday life. One of the participants stated that he finds himself thinking about his activities for the next day before retiring to bed every night. Some of the students also mentioned character developments such as accountability, commitment, honesty, orderliness, focus, and resourcefulness as traits they have learnt in the course of their time in an ACE school.

Biblical values. ACE’s foundation is in the Bible. The leading scripture is in Proverbs 22:6- “Train up a child in the way he should go: and when he is old, he will not depart from it”. Life-long training is the goal of the ACE program. The expectation is that when a child has been trained in the scriptures and the character traits, the child cannot fail to become an asset anywhere they find themselves.
The students stated that the learning of Scripture verses and the cartoon strips in the PACEs has helped and prepared them to face life out of school. One of the participants said that the scripture verses encourage her to believe in herself.

In the researcher’s experience the memorization of Scripture is an exciting part of the ACE’s curriculum and the children have an opportunity to gain merits for memorization, recitation and sometimes written reports on Scripture or character traits.

5.3 Implications for Nigerian Education
As discussed in section 1.1, the problems found in the Nigerian education, which have to do with the curriculum and instruction in the classroom, are numerous. The last question posed in section 1.2 is addressed here.

How does it address some of the Nigerian Education Issues?
Learning Gaps
Learning gaps occur when a student has not mastered a concept and is then promoted to another class to build on the previous level knowledge. The difficulty is then carried over to the next class. The practice of promoting on the bases of average performance is the arbiter of this problem.
The ACE. policy on Mastery learning and Diagnostic testing can take care of this problem. If students are enrolled into school, not according to age or average performance but on actual subject performance then learning gaps will be avoided. The fact that mastery is a condition of progress is also commendable. If a child is made to remain on a concept until mastery is attained then learning gaps will be completely eradicated and children’s progress will probably smoother and faster than it is now.

Teacher’s role
The teacher’s contribution in the process of learning cannot be taken lightly even in the Individualized Classroom. The teacher in the Nigerian setting holds all academic authority in their hands. They decide on when lessons are taught, how often and most times even how much information the child can acquire on various subjects. Some students have incurred the wrath of teachers by going on their own to gather more information on a subject, more than the note prepared by the teacher, and writing such in a test or examination.
This all powerful attitude of teachers has created a breed of students who are complacent and mediocre in their thinking and expectations. Such students are satisfied to just ‘get by’ with a pass mark of 40%. They lack drive and motivation for excellence because it is not required from them.

The ACE’s insistence on the responsibilities of the teacher as that of Instructing, Motivating, Disciplining, Inspiring, and Praising, can help teachers have a better understanding of how their perspective to their work affects student’s performance.

The ACE takes training very seriously that it recommends re-training every five years and an Educators convention attendance every year. Many Nigerian teachers have not been back to school in 10 or more years of teaching. Personal experience shows that teacher’s do not go back to school because there is no provision of in-service training opportunities for teachers. Teachers who cannot afford to lose their jobs remain without re-training or even seminars for years. Therefore many teachers remain ignorant of new innovations in the field of education.

**Private School Phenomenon**

Although this seems to be an administrative issue, there are curriculum issues also ingrained in this problem. Private schools are the greatest contributors to the problem of learning gaps and indiscriminate promotion and admission of students. Class populations are very high in many schools that lack space to expand and this leads to inefficiency in the teaching learning process. Teachers only do so much in such situations and many private schools resort to bribery and examination malpractices during State or Federal examinations. This has made the issue of motivation and sense or desire for self-discovery in the student’s non-existent.

Having a Teacher-pupil ratio of 1:10 like the A.C.E., will help with class population issues as it will either force schools to take on only the number their physical space can accommodate or expand the facilities of the schools.

Private schools were meant to take up the slack where Government Schools were not available or inadequate. This is not strictly the case now as many private schools cannot meet the standard but are merely money-making ventures for the proprietors. The lack of adequate monitoring of standards is the reason for the continuance of this menace.
5.4 Research Objectives
The objective of the research was to evaluate Individualized instruction in the ACE curriculum. It was discovered during the course of the research work that the program is truly individualized and not personalized in that it controls content and method allowing the learner to determine the pace and quantity of work in any given period. It emphasizes mastery which helps to eliminate learning gaps. Although the children are basically limited to reading in the classroom activities, there are opportunities for the use of other media and methods such as projects, practical audio-visual aids, etc. It is therefore clear that the research fulfilled the objectives.

5.5 Recommendations

5.5.1 Individualized Instruction in the ACE.
When the question of perceived strengths and weaknesses was raised, a number of issues were identified and will now be discussed here as a recommendation for the managers of the program to consider.

When asked if there were things to be changed in the program, one of the participants raised the issue of difficulty in ordering PACE. This was corroborated by the coordinator of schools who said it was the reason for the discouragement of many proprietors in the use of the A.C.E. curriculum. The fact that for Nigerian schools PACEs are not produced in Nigeria but shipped on order from South Africa or U.S.A., it not only takes long term planning but sufficient funds to purchase PACEs for anticipated students. This means, if students are not to be kept waiting for PACEs, a school must have ordered for September admissions from as early as April to give time for shipment and Port clearance as any other means of transportation will only make the PACEs more expensive and thereby negate the affordability of the material. The researcher recommends that there should be a stronger push for the printing of the material in Nigeria.

Another issue raised concerns the teacher-pupil ratio. Although teachers are comfortable with the recommended ratio, they complained that many schools do not adhere to it. This calls for monitoring teams to be set up and enforcement of all the policies of the Program to be put in place.
Students also complained of lack of facilities for Science laboratory work and Sporting facilities. It is believed that because of the fact that many schools are still in the primary grades of the program, the Nigerian Office can look at setting up a central Laboratory for the few schools that are running the A.C.E. Secondary curriculum. This will reduce cost to individual schools.

Lack of social interaction has been a major criticism of the program. Although at the student conventions the students have sporting activities and receive medals, trophies and such for the events, many A.C.E. schools do not provide facilities nor do they create time for active and competitive sporting activities. This once a year meeting is insufficient for the ACE’s aim of developing a child’s full potential. There is no provision for those children who have musical, artistic, athletic or even culinary talents.

Class arrangement is also one of the issues of complaints of the participants. Even though the program advocates putting children of different grades together in the same Learning Centre, it might be beneficial to have students of grades 2 and 3 separately since they still have to read passages to the supervisors and this can sometimes get noisy and distractive or alternatively a room be created for reading.

With regards to resources, it is the researcher’s recommendation that the ACE should look into providing their supervisors and students with other non-ACE materials including access to and exposure electronic media so as to broaden their knowledge of the world in which they live. This is important because in my experience, ACE students are so protected and limited in their exposure to what other young people around them are doing that they get a shock when they eventually go to higher institutions, many times it has been difficult for them to cope and they end up losing the values learnt in the years with the program.

5.5.2 Implications for further studies
Having looked at the findings in terms of the Nigerian education, I realize that it is not enough to know the nature and impact of the program but it would be good to find out in concrete figure terms how the products of the program rate against their counterparts from strictly Nigerian system schools. This would be an interesting research area.
Another area of interest would be to evaluate the program in terms of career opportunities open to students given the subjects on offer.
REFFERENCES

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REQUEST FOR PERMISSION TO CARRY OUT A RESEARCH PROJECT ON THE ACE CURRICULUM IN NIGERIA.

Dear Ma,

Greetings in the name of the Lord Jesus, our Saviour.

I request permission to use the ACE Nigeria as the focus of my Research work with the University of South Africa. The research title is; “An Evaluation of Individualized Instruction as used by the Accelerated Christian Education in Plateau State, Nigeria.”

The dissertation aims at critically assessing the effectiveness of Individualized Instruction as an alternative method of instruction to correct such educational challenges as Learning gaps.

The type of data required will include documents reflecting the ACE Ministry’s curriculum, experiences of students and supervisors using the program. The identity and confidentiality of the participants will be preserved. A copy of the transcripts of the research will be made available to the participants and their parents before its use in the research.

Thank you for your cooperation.
Yours Sincerely,

Mrs Christiana Shaba
(07067911376 or 08056474276)
APPENDIX 2

The Principal, c/o Rev Adams Shaba
Faith Christian Academy ECWA Headquarters
Jos. 1, Noad Avenue

04/11/2011

Request for permission to select participants from your school for my research project.

Dear Ma,

I am Christiana Shaba, writing to request the use of your school and some of your students and Supervisors as participants in the research project for Med Didactics in the department of Curriculum Studies of the College of Education, University of South Africa (Unisa).

The project title is “An evaluation of Individualized Instruction as used in the Accelerated Christian Education curriculum in Plateau state of Nigeria”. The aim of this research project is to find out how the ACE uses Individualized Instruction and find out its effectiveness or lack thereof in combating the Nigerian education problems such as: Learning gaps, Continuous assessment etc.

There will be a need for interviews, and Naïve sketches, that is, short essays by students on their overall experience in an ACE school. The supervisors will also be required to participate in an interview.

The project will require the participation of students in Grade 9-11, 3 from each Grade (this grade group is required because they have a longer experience with the program) and 3 Supervisors.

The issue of confidentiality and anonymity is taken very seriously by Unisa and therefore will be respected. No names will be used and any confidential responses will not be used by the interviewer.

There will be a need for parental consents to be granted for the students to participate in the research. Please find attached a copy of the interview questions and the parental consent forms for students and personal consent forms for the supervisors.

Thank you for your cooperation.

Yours sincerely,

Mrs Christiana Shaba. (07067911376 or 08056474276)
APPENDIX 3

04/11/2011

Request for permission to allow your ward/child participate in a research interview.

Dear sir/ma,

I am Christiana Shaba, a student of Didactics in the Department of Curriculum Studies, College of Education, University of South Africa. I am writing an MEd dissertation on the topic ‘An evaluation of Individualized Instruction as used in the ACE curriculum in Plateau state, Nigeria.

Your permission is requested for your child/ward to participate in an interview for the dissertation. The confidentiality and identity of your child is assured as no names will be used in the research. You will have access to the transcript of the interview before it is used in the research.

Your affirmative response will be highly appreciated.

Yours Faithfully,

Christiana Shaba (Researcher)
07067911376/08056474276

Please cut and send back to the school.

I/We parent/guardian of _____________________________ agree to allow our child/ward participate in the research interviews.

Signature and date
APPENDIX 4

c/o Rev. Adams
Shaba
ECWA Headquarters,
1, Noad Avenue,
Jos.

04/11/2011

Request for consent to participate in a research.

Dear sir/ma,

I am Christiana Shaba a student of Didactics in the Department of Curriculum Studies, College of Education, University of South Africa. I am writing a dissertation on the topic ‘An evaluation on the use of Individualized Instruction

You will be interviewed and your confidence and identity will be protected as you will not be identified by name in the research work. You will have the opportunity to read the transcript of the interview before it is used in the research.

Please be aware that your contribution and sincerity will be appreciated as the research could help in further making educating young ones easier and better.

Thanks in advance of your positive response.

Yours Sincerely,

Christiana Shaba (Mrs)
Researcher 07067911376 or 08056474276
4th December, 2011.

c/o Rev. Adams Shaba
ECWA Headquarters
1 Noad Avenue
Jos.

Dear Christiana Shaba,

PERMISSION TO CARRY OUT A RESEARCH PROJECT ON A.C.E CURRICULUM IN NIGERIA

This is to inform you that your request to use A.C.E Nigeria as the focus of your research work with the University of South Africa titled, “An Evaluation of Individualized Instruction as used by the Accelerated Christian Education In Plateau State, Nigeria,” has been granted.

I wish you all the best in your endeavour.

Yours faithfully,

Panya Baba, Naomi (Mrs.)
National Director
5th December 2011

C/O Rev. Adams Shaba
EWA Headquarters
No. 1 Noad Avenue,
Jos.

Dear Christiana Shaba,

RE-REQUEST FOR PERMISSION FOR RESEARCH INTERVIEW

This is to inform you that your request to interview some of our students in line with your Masters Dissertation on the topic, “An evaluation of Individualized Instruction as used in the A.C.E. Curriculum in Plateau State, Nigeria,” has been granted.

Yours faithfully,

[Signature]

MRS. V.V. WAKAHA
School Administrator
APPENDIX 7

STUDENT INTERVIEW SCHEDULE

The interviews begin with appreciation from the researcher on the participants willingness to participate. The researcher makes it clear that the confidentiality and anonymity of the participants is well preserved and that the research is mainly for academic and administrative purposes.

The participants are made aware of the fact that the interviews will be recorded and later transcribed. The fact that they will have the opportunity to read the transcribed notes and listen to the tapes if they so wish before the information gathered is used in the research was stressed to them.

BACKGROUND

May I know how old you are?
What grade are you presently in?
Is this the only school you have attended?
If not, may I know your reason for transfer?

Individualized instruction

What is your experience with Student Offices?
What is your experience with Scoring Procedures?
How do you feel about goal setting?
What do you think about your PACEs?

Assessment Procedures

What is your experience with Check-ups, Self-tests, and PACE tests?

Supervisors and resources

How do you view your educators?
Are there enough resources to enable your learning environment? Are they adequate?
How are your classes arranged, do you like the arrangement and why?

Relevance of ACE

Can you explain how you think your experience in this program will help you in your future academic pursuits?
What do you think needs changing in the Program?
What do you think other people feel about the program?
APPENDIX 8

Background
What position do you hold in the School?
May I know of your teaching experience?
Why the choice to work in an ACE school?
Have you any experience other programs?

Objectives of the program
What are the objectives of the program?

Curriculum
What does the curriculum entail?
Do you think the curriculum is in line with the needs and philosophy of the country?
Does the curriculum achieve the set objectives and principles?
Has the program ever been evaluated? If yes, what are the results and improvements made? If not, do you know why?

Classroom Procedures
What is your experience with ACE classroom procedures?

Assessment procedures
What are the programs assessment procedures?

Supervisor-student relation
What is your role as a supervisor?
Is the teacher-student ratio adequate?

Training
What kind of training did you receive and was it enough for your work?

Perceived Strengths and Weaknesses
What makes the program different from others?
What would you change if you had the opportunity?
Would you recommend the program for use in Nigerian Schools? Why?