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1) It must be typed in MS-word, using ‘Times New Roman’ font 12. The spacing should be 1.5, but the tables and figures should be single spaced.

2) The title page should include the topic, corresponding author's full address and telephone/fax numbers and should be in an e-mail message sent to the Editor-in-chief, with the file, whose
name should begin with the first author’s surname, as an attachment.

3) All manuscripts are peer-reviewed by qualified scholars carefully chosen. The reviewers’ comments are usually made available to authors within two weeks. The authors are expected to submit the corrected copies within a period of one month.

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5) The Abstract should be about 200 words. It must contain the background to the problem, purpose of the study, methodology, findings, conclusion and implications for policy/recommendations. Usually, references are not cited in the abstract. Keywords of 3-5 words can be stated below the abstract.

6) A list of non-standard Abbreviations should be added. In general, non-standard abbreviations should be used only when the full term is very long and used often. Each abbreviation should be spelt out and introduced in parentheses the first time it is used in the text.

7) The Introduction should provide a clear statement of the problem, the relevant literature on the subject, and the proposed approach or solution.

8) The methodology should be complete enough to allow possible replication of the research. It should contain the research design, population, sampling procedure, sample size, instrumentation, test for reliability, validation, method of analysis and level of significance. Slight variations are allowed.

9) The results should be presented with clarity and precision. It should be presented under the directional/research questions or hypotheses. It should be written in the past tense when describing author’s findings, but references to previous findings should be written in the present tense. The results should be explained.
10) The Discussion should relate the research findings to the findings of earlier researches that are relevant to the study. Justification should be made for deviation from expectation and previous studies.

11) Tables should be kept to a minimum and be designed to be as simple as possible. No table should exceed a page. Each table should be on a separate page, numbered consecutively in Arabic numerals and should bear a title. Tables should be self-explanatory without reference to the text.

12) References should be in the latest American Psychology Association (APA) bibliographic format.
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Abstract

Constantly teaching a large class or even a small one can be boring and bothersome. The value of a large class is that it contains a diversity of students and learning styles and one can use many different active and fun ways of teaching. Teaching large classes in universities has become a phenomenon in recent years all over South Africa. This study sought to address strategies that can assist university lecturers in teaching large classes in universities, addressing challenges in large classrooms and promote effective teaching in large classrooms. A structured questionnaire, with a reliability coefficient of 0.87, was administered, adopting a descriptive survey research design. One hundred and four lecturers from one South African University were selected for the study. The findings from the study reveal that continuous professional development should be organized for lecturers teaching large classes in universities. In addition, those combinations of strategies should be adopted in teaching large classes in university to enhance learning outcomes among students. The study concludes that continuous professional training programme should be organized for lecturers teaching large classes in universities to enhance their teaching skills.
Key Words: Large Classes, Effective Teaching, Inadequate Resources, Lecturers, Instructional Materials.

Introduction
Large classes give a lecturer the opportunity to improve teaching and presentation skills. Constantly lecturing a large class or even a small one can become boring and bothersome. The value of a large class is that it contains a diversity of students and learning styles and one can use many different, active, and fun ways of teaching. The cumulative knowledge, experiences, skills, and interests of students, can be valuable starting points for planning lessons and activities so that learning becomes meaningful for the students.

Teaching a large class, enable lecturers to improve their evaluation skills, as they will devise a variety of ways to assess whether the students have really learned. For instance, a teacher can give students in-class and out-of-class assignments that ask them what they have learnt and what questions they have about what they have learnt. Rather than following the students’ failures, their achievement can also be tracked. Involving students actively in learning and assessment can save time and reduce the lecturer’s workload. Thus, students will benefit from being in large classes (UNESCO, 2006).

There is no single definition of a large class. It may be referred to as a class of 80 students or more. In some cases, it maybe a class of 40-70 students. Large classes in the universities are mostly found in the general courses in the first year of study. Lecturers teaching this class have an additional responsibility of exposing first-year students to university life, while also introducing them to learning in the university context.

Many teachers in Asia are working in large-sized primary school (UNESCO, 2006). Usually, the large class is measured in terms of student-teacher ratio. In some countries, 25-30 students per teacher are considered large, while in other countries this is seen to be normal or even quite small. Dino (2005) informs that some lecturers who have 25 – 35 students in the class refer to this as a large and overwhelming class. In South Africa, the Department of Higher Education and Training (DHET) pegged it at ratio 1:40 students. However, tertiary institutions in South Africa are experiencing more than this.
Similarly, many lecturers faced with large classes might be tempted to give up, thinking that there is no chance of getting so many students to learn. The problem is, however, that they assume that learning occurs in proportion to class size. The smaller the class, the more students learn. However, research shows that class size does not automatically correlate with student learning. Students in large classes can learn just as well as those in small ones. What counts is not the size of the class, but the quality of the teaching. Evidence shows that students place more emphasis on the quality of teaching than class size. Moreover, they may not mind being in a large class as much as you may think they do, or as much as you mind it yourself (Adjogri, Adu & Adelabu, 2014).

Mulligan and Kirkpatrick (2000:8) reported on what is valuable to students in large classes including among others:

- Give students a short task in the first tutorial to identify their potentially;
- Provide online support (e.g. discussion forums on the web; course FAQs; self-review quizzes; links to key support sites around the university);
- Develop peer-assisted study programs and mentoring schemes to encourage student interaction; and
- Make the most of small group tutorials for building student confidence and developing connections between students, academic staff and the culture of the department.
- Build interest and rapport by adopting a relaxed style where students feel comfortable to ask questions.
- Include regular opportunities for students to discuss key points among themselves.
- Avoid the use of humour which may not be understood by students from different cultural or linguistic backgrounds;
- Make the aims of the class explicit and clear.
- Follow a straightforward progression with a predictable format;
- Vary the pace during sessions to maintain interest (use a range of media to emphasize key points);
- Explanation and elaboration: give clear explanations of technical terms. Use examples from students' own
experiences, cultures, and backgrounds. Provide definitions and country-specific terms.

- Some lecturers ask students to compile glossaries of key terms in groups to assist comprehension;
- Explicitly identify important information and key concepts. Use clear verbal and written signals when you change topic or emphasis. Avoid relying on tone or intonation alone to signal changes of the topic;
- Create an atmosphere that encourages student questions (there is no stupid question).
- Repeat questions so that the whole group can hear. Respond empathetically to student questions. Model the question response behaviour that you wish to encourage;
- Visual and multimedia resources: use a range of strategies to enhance student understanding (graphs, diagrams, movie clips) and give students opportunities to revise material (Power Point’s and lecture capture technology). (Adu, Bayaga, & Tella, 2014)

Research Questions

The following are the questions to guide this study.

1. What are the challenges in large classrooms at a selected university in Eastern Cape Province, South Africa?
2. What are the strategies for teaching large classes at a selected university in Eastern Cape Province, South Africa?
3. What are the ways to promote effective teaching in large classrooms in a selected university in Eastern Cape Province, South Africa?

Literature review

In large classes, it is very imperative to make the best use of available time for learning. That time management is very essential means of planning. A sizable portion of the work involved in teaching a large class takes place well before the first day of class. For example, in a small class, you can more easily give an impulsive assignment, but in a large class, you will need more time to carefully plan your lesson and its activities. (Adu, et al 2014)

Regrettably, many teachers have never been taught how to plan lessons. They were taught to rely on textbooks, in some cases
because is the only available teaching aid. In any case, a good lesson plan will help to relieve fears teaching many students because the lecturer will know in advance, what to do, why, and how to do it. The lecturer will be able to convey a lesson calmly, and the assurance will carry over to the students who, in turn, will be more restful in learning from the lecturer. Even if the lecturer relies on a textbook, he or she must plan how to communicate the information in it so that all of her or his students will understand. For large classes, this planning is not magnificent; it is a necessity because it will bring order into the classroom environment, even though it may be crowded. (Dion 2005)

The following are some of the most important elements in lesson planning that can help you to manage the learning of many students.

- Teaching large classes becomes much more difficult if the lecturers are uncertain about what they are teaching. Read up on those topics that will be covering so that the lecturers are confident in presenting them and can maintain a steady focus during the teaching. Students will be able to follow the lecture and its activities easily and will be less likely to become bored and disruptive. Think of questions to ask students, and try to anticipate questions that students might ask you. Review the course materials, assignments, and reading lists of other teachers who have taught the topic before. If possible, attend a class taught by an experienced teacher to see how he or she organizes the content and student activities in his or her large class.

- Think about the knowledge, skills, and attitudes expected the students to learn. Choose two or three to focus on one lesson. Explain clearly to all the students what you want them to learn from a specific lesson. Some teachers with large classes write the learning objectives on the chalkboard or a large piece of poster paper before class begins. They then explain each objective to their students at the start of the class so everyone has a common understanding of the lesson to be learnt.

- The best way to lose students’ attention in a large class is to present topics, concepts, and activities in a random manner. Some lessons and their content are best presented chronologically, such as historical events, or sequentially in a systematic approach (A leads to B, which leads to C). At
other times, a lecturer can describe a problem and then illustrate its solution, or, better yet, have the students work individually or in groups to illustrate how they might solve it.

- Although the teacher may be tempted to do so, they do not plan to teach for an entire period. Since the attention span of the average student is limited to increments of 10-15 minutes, it is best if you change the format of the teaching every so often so that all the students will remain attentive. In large classes especially, there is a tendency for students to start talking amongst themselves (or even to fall asleep) when they become bored. Therefore, plan on “mini-lectures” interspersed with brief activities, such as questions and answers or inviting students to share related examples or personal experiences (Adu et al. 2014)

In planning lessons for a large class, identify activities in which all of the students can participate in an orderly manner, and select one or, better yet, two teaching methods for each class session: lectures, small group discussions, independent work, role-playing, demonstrations, etc. Decide how to: (a) prepare the class instruction, (b) present the new concepts, (c) have students apply what they have learned through activities (for example, through discussions in class, writing activities, or collaborative work), and (d) assess whether students can put into practice what they have learned (for instance, through a short quiz, in-class writing assignment, a problem-solving exercise, or homework).

While a lot of careful planning is needed to develop an appropriate learning activity, the major reward is better student learning in the large class. To start, instead of asking “What to do in each class session?” focus on “What are students going to do?” Make sure that whatever activities are chosen; students will achieve their learning objectives.

- While the class teacher is responsible for students’ learning, the teacher can get others to help. These “teaching assistants” can be valuable assets to the large class because they will allow the teacher to work with individual students, to manage activities effectively, and to observe the overall class. For instance, ask retired teachers, high school graduates, or parents to help manage your large class or to
teach appropriate lessons. They can be particularly valuable in helping the students to conduct group activities. The teacher can even ask older students or the best students in the class to act as peer teachers. Encourage “experts” from the community to be resource persons in classes that talk about special skills and knowledge.

- Are there students in the classroom who will need extra help? What kind of support will the teacher need to provide to these students? Do the teacher needs to help them on an individual basis, or can other students assist them?. Does the teacher need to make sure that they are sitting in an appropriate place in the classroom? Often it helps to have students who need extra help at the front of the classroom where the teacher can easily help them, especially if the classroom is crowded.

- Good lesson plans achieve at least two objectives. First, they outline what the teacher hopes will occur during a class and, possibly more important, they convey to students that their teacher has thought about the session and its activities. Some of the ways the teacher can plan the lessons well are by using a simple lesson-planning outline, daily lesson planning format, or a lesson-planning matrix as shown below. Try to use at least one of them in planning your lessons; maybe start with just one topic or lesson. They will give the teacher a firm start in organizing your teaching in a large class setting; a way to monitor whether or not your students are understanding what is taught; and a chance for the teacher to think about what to do next and how to improve his or her teaching.

- Teaching a large class takes a great deal of time and energy. If you feel rushed or overwhelmed, the students will feel it too. The teacher needs to set up weekly work schedules so that he or she is prepared for what needs to be done. The teacher should find ways to scale back other obligations, in order to have time to deal with the complexities of teaching such classes (Adu et al. 2014).

**Challenges of Teaching Large Classrooms**

There are numerous challenges of teaching large classrooms; some of them are discussed below;
• One of the main difficulties that a teacher may experience while teaching a large class is a tremendous effort that she or he will have to make. With an outnumbered class, there is always something to be done.
• With a large class, it is difficult to get a satisfactory knowledge of student’s needs. Intimacy with students and remembering names might be a problem.
• As a consequence of a large number of students, the noise level is inevitably high which adds to the stress teachers may experience.
• Organizing, planning and presenting lessons may constitute another challenge for teachers in such classes as students’ abilities might differ considerably.
• There is another difficulty related to the learning process. In fact, engaging learners actively in the learning process may not be easy in a crowded class.
• It is hard to imagine how a large class would benefit from school resources such as computers, books, references and laboratory resources.
• With a crowded classroom, teachers might find it difficult to measure effectiveness.
• A large class gives reluctant students a place to hide. (Shannon2016)

Poor attendance of lectures by students is one of the major challenges militating against the teaching of large classes in universities. Deed (2007:35) reports in his study that one of his senior colleagues at La Trobe University in Australia commented, “300 students in his first lecture in February has gradually eroded to 17 by late May. In a study carried out by Snowball and Wilson (2015) on Introductory Macroeconomics, it was found that non-attendance of students and poor lecture quality were discovered to be the most common challenges confronting teaching a large class. In another study carried out by Taiwan, Lin, and Chen as cited by Lipinge, Miranda, and Ashili (2013), it was discovered that there was a strong relationship between class attendance and performance in a course on public finance. This finding is also in agreement with that of Thatcher, Fridjhon, and Cockcroft (2007)
and Marburger (2011) which concluded that there is a strong positive relationship between performance and class attendance. Report on the UNESCO workshop (undated) held in Kenya as cited in Lipinge, Miranda, & Ashili, (2013) identified some problems associated with large classes teaching which are as follows:

- It is hard to give individual advice and guidance to students.
- Organizational problems are compounded, making it difficult to schedule tutorials, laboratory sessions, and fieldwork.
- There can be technical problems working with large classes e.g. difficulties in projecting slides that are clearly visible to all students.
- The monitoring of attendance can be difficult. Thus, encouraging students to cut classes.
- Coping with large numbers of assignments and examination scripts is a source of difficulty.
- The quality of feedback to students can be much reduced in large classes (unesco-bamako.org/slide/fb/modules.pdf).

Research findings show that instructors perceive large classes as troublesome, difficult and problematic as compared to smaller classes. Exley and Dennick, (2014) and Bligh (2010) revealed that when educators are confronted with large classes, they employ lecture methods without considering the need to use teaching strategies that promote discussion, critical thinking, attitudinal change or behavioral skill in students. Laurillard (2012) concludes that higher education is made up of students with different academic abilities and as such most students will have to struggle to learn materials presented to them through lectures.

**Methodology**

The study adopted a descriptive survey research design. The population of this study comprises mainly all the 405 lecturers in a selected university. A simple random sampling technique was used in the selection of the lecturers. The sample size of this study consists of 104 lecturers from the selected University, which represented 25.6% of the total population in order to make it representative. A structured questionnaire was used to elicit information from the respondents. Experts in the same field validated the instrument and Cronbach alpha was used to
measure its reliability. Their liability coefficient is \( r=0.87 \). The instrument was divided into two sections; section 1 required respondents’ bio-data, while section 2 contained three parts. Part 1 contains items on strategies for teaching and managing large classes, part 2 contains items on the challenges in a large classroom and part 3 contains expectations toward successful teaching in a large class. The instrument was administered to the respondents in the university selected with the support of research assistants. The administration was completed in 10 days. Data collected were analyzed using descriptive statistics.

Findings

**Research question 1**: What are the challenges in large classrooms at a selected university in Eastern Cape Province, South Africa?

<table>
<thead>
<tr>
<th>Challenges in large classrooms at University</th>
<th>SD Count (Frequency)</th>
<th>D Count (Frequency)</th>
<th>A Count (Frequency)</th>
<th>SA Count (Frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate resources</td>
<td></td>
<td></td>
<td>30(28.8)</td>
<td>74(71.2)</td>
</tr>
<tr>
<td>Time and energy needed</td>
<td></td>
<td></td>
<td>30(28.8)</td>
<td>44(42.4)</td>
</tr>
<tr>
<td>Getting to know all students</td>
<td></td>
<td></td>
<td></td>
<td>59(57.7)</td>
</tr>
<tr>
<td>Giving individual attention</td>
<td></td>
<td></td>
<td>15(14.4)</td>
<td>45(43.3)</td>
</tr>
<tr>
<td>Marking the scripts</td>
<td></td>
<td></td>
<td>30(28.8)</td>
<td>44(42.4)</td>
</tr>
<tr>
<td>Unequal participation of students</td>
<td></td>
<td></td>
<td>59(56.8)</td>
<td>15(14.4)</td>
</tr>
<tr>
<td>Student diversity</td>
<td></td>
<td></td>
<td>15(14.4)</td>
<td>59(56.8)</td>
</tr>
<tr>
<td>Monitoring of attendance</td>
<td></td>
<td></td>
<td>15(14.4)</td>
<td>59(56.8)</td>
</tr>
</tbody>
</table>
Table 1 shows that 30(28.8%) of the lecturers agreed that the issue of inadequate resources is a challenge and 74(71.2%) of the lecturers strongly agreed. 30(28.8%) of the lecturers disagreed that time and energy needed is a challenge while 44(42.4%) agreed and 30(28.8%) strongly agreed. 59(57.7%) of the lecturers agreed that getting to know all students is a challenge and 45(42.3%) strongly agreed. 15(14.4%) lecturer disagreed that giving individual attention is a challenge while 45(43.3%) agreed and the remaining 44(42.3%) strongly agreed. 30(28.8%) lecturers disagreed that marking the scripts is a challenge, while 44(42.4%) agreed and 30(28.8%) strongly agreed. 59(56.8%) lecturers disagreed that unequal participation is a challenge, while 15(14.4%) agreed and 39(28.8%) strongly agreed. 15(14.4%) lecturer disagreed that student diversity is a challenge, while 59(56.8%) agreed and 30(28.8%) strongly agreed.

15(14.4%) lecturer disagreed that monitoring of attendance is a challenge, while 59(56.8%) agree and 30(28.8%) strongly agreed. 15(14.4) of the lecturers strongly disagreed that finishing the syllabus is a challenge and 59(56.8%) more lecturers disagreed, while 30(28.8%) of the lecturers agreed. 15(14.4%) of the lecturers disagrees that there is limited interaction with student, while 44(42.4%) agree and 45(43.2%) strongly agreed. The result of the findings of this study is in contrast with the view expressed by Lipingeet al. (2013) where they pointed out some of the challenges of teaching a large class in Universities. According to Lipingeet al. (2013) provision of feedback, student motivation, poor quality instructional materials, classroom management and lack of appropriate quality assessment are some of the challenges facing the teaching of large classes in universities. It is therefore expected that lecturers teaching large classes be conversant with challenges facing teaching large classrooms with a view to providing appropriate teaching strategies in their classroom teaching.

In a related study conducted by Snowball and Wilson, (2015) on an introductory macroeconomics course non-attendance
of students and poor lecture quality were found to be the most common challenges of teaching a large class. This position is in support of the outcome of the analysis in Table 1.

**Research question 2:** What are the strategies for teaching large classes at a selected university in Eastern Cape Province, South Africa?

**Table 2: Strategies for teaching and managing large classes**

<table>
<thead>
<tr>
<th>Strategies for teaching and managing large classes</th>
<th>SD Count (Frequency)</th>
<th>D Count (Frequency)</th>
<th>A Count (Frequency)</th>
<th>SA Count (Frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is motivation to capture students' attention</td>
<td>0</td>
<td>0</td>
<td>60(57.1)</td>
<td>44(42.9)</td>
</tr>
<tr>
<td>Always make class lively</td>
<td>0</td>
<td>15(14.3)</td>
<td>60(57.1)</td>
<td>29(28.6)</td>
</tr>
<tr>
<td>Give students advance organisation tasks</td>
<td>0</td>
<td>0</td>
<td>75(72.1)</td>
<td>29(27.9)</td>
</tr>
<tr>
<td>Connections between prior and new knowledge</td>
<td>0</td>
<td>0</td>
<td>29(27.9)</td>
<td>75(72.1)</td>
</tr>
<tr>
<td>Relate to real world applications</td>
<td>0</td>
<td>0</td>
<td>60(57.7)</td>
<td>44(42.3)</td>
</tr>
<tr>
<td>Use visual, hand-outs, skeleton lecture notes etc.</td>
<td>0</td>
<td>0</td>
<td>60(57.7)</td>
<td>44(42.3)</td>
</tr>
<tr>
<td>Encourage lecturer-student interaction</td>
<td>0</td>
<td>15(14.4)</td>
<td>44(42.3)</td>
<td>45(43.3)</td>
</tr>
<tr>
<td>Use team</td>
<td>0</td>
<td>44(42.3)</td>
<td>30(29.8)</td>
<td>30(28.8)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30(28.8)</td>
<td>74(71.2)</td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>Encourage cooperative learning</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acknowledge key issues students might face</td>
<td>0</td>
<td>30(28.9)</td>
<td>59(56.7)</td>
<td>15(14.4)</td>
</tr>
<tr>
<td>Acknowledge the limitations of the lecture theatre</td>
<td>0</td>
<td>44(42.3)</td>
<td>44(42.3)</td>
<td>16(15.4)</td>
</tr>
</tbody>
</table>

Table 2 showed that 60(57.1%) lecturers agreed that motivation captured students’ attention while 44(42.9%) strongly agreed. 60(57.1%) lecturers strongly agreed that they always make the class lively while 51(14.3%) lecturer agreed. 75(72.1%) of the lecturers agreed that they give students advance organization tasks and the remaining 29(27.9%) strongly agreed. 29(27.9%) lecturers agreed that they connect between prior and new knowledge and 75(72.1%) lecturers strongly agreed. 60(57.1%) lecturers agreed that they relate to real-world applications and 44(42.3%) lecturers strongly agreed. 60(57.7%) lecturers agreed that they use visual, handouts, skeleton lecture notes, etc. and 44(42.3%) lecturers strongly agreed. 15(14.4%) lecturers disagreed with encouraging lecturer-student interaction, while 44(42.3%) lectures agreed and another 45(43.3%) lecturers strongly agreed. 44(42.3%) lecturer disagreed with the use of a team project, while 30(29.8%) lectures agreed and 30(28.8%) lecturers strongly agreed. 30(28.8%) lecturers agreed that they encourage cooperative learning and 74(71.2%) lecturers strongly agreed. 30(28.8%) lecturers disagreed with acknowledging key issues students might face, while 59(56.7%) lectures agreed and 15(14.4%) lecturer strongly agreed. 44(42.3%) lecturers disagreed to acknowledging the limitations of the lecture theatre, while 44(42.3%) lectures agreed and another 16(15.4%) lecturer strongly agreed. The findings from Table 2 above, majority of the respondents were in support of the strategies for teaching and managing large classes in universities. Many scholars corroborated this position. According to
Ives, (2000); Adu et al. (2014) and Kerr (2011), there is no single strategy for teaching large class but suggest that the following strategies should be taken into consideration when teaching large class: ones teaching style, characteristics of students and the goals and objectives of the course.

However, Kerr, (2011) also suggest that educators need to re-think their teaching strategies. This assertion is in contrast with the findings of this study, which shows that motivation to capture student’s attention; making class lively; organization of task; creating connection between prior and new knowledge, relate to real-world applications, using visual hand-outs skeletal lecture notes, encouraging lecturer-student interaction, use of team project and cooperative learning are some of the teaching strategies to be adopted in the classroom learning.

**Research question 3:** What are the strategies for teaching large classes at a selected university in Eastern Cape Province, South Africa?

The table below shows the responses of the respondents on how they can promote effective teaching in a large classroom.
Table 3 How to promote effective teaching

<table>
<thead>
<tr>
<th>How to promote effective teaching</th>
<th>SD Count (Frequency)</th>
<th>D Count (Frequency)</th>
<th>A Count (Frequency)</th>
<th>SA Count (Frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use a team project</td>
<td></td>
<td></td>
<td>44(42.3)</td>
<td>60(57.7)</td>
</tr>
<tr>
<td>Dividing students into small groups</td>
<td>0</td>
<td>0</td>
<td>40(38.5)</td>
<td>64(61.5)</td>
</tr>
<tr>
<td>Make a big class artificially small</td>
<td>44(42.3)</td>
<td>15(14.4)</td>
<td>30(28.9)</td>
<td>15(14.4)</td>
</tr>
<tr>
<td>Do what you do in a small class</td>
<td>44(42.3)</td>
<td>15(14.4)</td>
<td>30(28.9)</td>
<td>15(14.4)</td>
</tr>
<tr>
<td>Encourage active and cooperative learning</td>
<td>0</td>
<td>0</td>
<td>44(42.3)</td>
<td>60(57.7)</td>
</tr>
<tr>
<td>Availability of teaching resources</td>
<td>0</td>
<td>0</td>
<td>44(42.3)</td>
<td>60(57.7)</td>
</tr>
</tbody>
</table>

Table 3 revealed that 44(42.3%) lecturers agreed to the use of team projects and 60(57.7%) lecturers strongly agreed. 40(38.5%) of the lecturers agreed to divide students into small groups and 64(61.5%) more lecturers agreed. 44(42.3%) of the lecturers strongly disagree with making big classes artificially small and 15(14.4%) more lecturer disagreed, while 30(28.9%) agreed and 15(14.4%) strongly agreed. 44(42.3%) of the lecturers strongly disagree with treating a big class like a small class and 15(14.4%) more lecturer disagreed, while 30(28.9%) agreed and 15(14.4%) strongly agreed. 44(42.3%) of the lecturers agreed to encourage active and cooperative learning and 60(57.7%) more lectures strongly agreed. 44(42.3%) of the lecturers agreed to availability of teaching resources and 60(57.7%) more lectures strongly agreed.

The findings from the analysis above described the importance of the need to promote effective teaching in a large
classroom. On the contrary, in a study carried out by Lipinge et al. (2013) on teaching a large class in a university, the author emphasizes the need to plan and design continuous professional development to focus on the use of time management of large classes, planning for large classes. Adu et al. (2014) succinctly described the principle and strategies of teaching large classes, include among others the following; principle and strategies of teaching large classes, student motivation, flexibilities and creativity in large classes, designing authentic assessment tasks and organizational strategies. These strategies will promote effective teaching in large classes in universities.

Bothe, Fourie and Gyser (2005) argue that promoting effective teaching in large classroom in university entails designing appropriate assessment programme that will provide immediate and quality feedback. This finding also corroborates Szabo and Hastings (2000); and Apperson, Laws, and Scepansky (2000) where it was argued that provision of teaching resources like PowerPoint software will facilitate the explanation of information to undergraduate students in universities. The findings of this study also corroborate the findings of Morgan, Whorton, and Gunsalus (2000). The duo conducted a comparison study on lectures combined with discussion versus cooperative learning and found out that lecture presentation format, when combined with discussion, enables students to retain the material information being presented.

**Recommendations**

Based on the findings, the following recommendations are made:

- Teaching a large class in Universities is a challenge but can also offer many opportunities for lectures to improve their teaching if the lecturers can divide the students into small groups.
- The study also recommends that lecturers should encourage active and cooperative learning with the availability of resources.
- The connection between prior and new knowledge can enhance the effective teaching of a large class. The use of visual, handouts and note should be encouraged. Students should be given advance organization tasks to foster
readiness and avoid interruptions during the teaching of large classes.

Conclusion
Teaching a large class has become a phenomenon in South Africa. The policy of higher education in the country promotes an increase in enrolment by more than 2%. This means that there is a need for lecturers to discover the best way to teach large classes since they cannot reduce the enrolment based on the policy. Some of the measures to be put in place for effective teaching in a large class from the findings of this study include the following among others. Teachers should have the understanding of the content (content knowledge - CK) he or she is teaching, the teacher should try to divide the class into a smaller group, the teacher should make use of student-centered methods (pedagogical content knowledge- PCK) of teaching to facilitate interactions and promote cooperative learning through peer tutoring. Adequate planning is very essential because the cumulative knowledge, experiences, skills, and interests of students, can be valuable starting points for planning lessons and activities so that learning becomes meaningful to the students. The smaller the class, the more students learn. However, research shows that class size does not automatically correlate with student learning. Students in large classes can learn just as well as those in small ones. What counts is not the size of the class, but the quality of the teaching. Evidence shows that students place more emphasis on the quality of teaching than class size.
References


BRIDGING THE TENSION BETWEEN ‘ERRORS’ AND COMMUNICATIVE COMPETENCE AMONG FOURAH BAY COLLEGE UNDERGRADUATES IN THE UNIVERSITY OF SIERRA LEONE

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Abstract
Traditional grammar puts too much emphasis on grammar rules that existed in Latin. This has considerably influenced the teaching of English in West Africa over the years. The result of this is that disciples of this approach sometimes tend to dismiss, as erroneous, expressions which are acceptable in present day English language. This was evident at Fourah Bay College where, 80 of the first-year students in 2018/2019 academic year were subjected to a perception test. In this test, they were asked to show their attitude to fifteen sentences from Jones’s The Freetown Bond in relation to pronoun, prepositional, modifier and sentence structure. The results showed that though the students performed well in the English module for the two semesters under review, all of them were unanimous in identifying not only grammatically correct sentences but in also dismissing, as erroneous, sentences that are part of everyday English language usage. Communicative competence is shown to be the basis for the achievement of English language proficiency. Inter Language Fossilisation deals with the stages second learners pass through while processing the language. These stages lead to the stagnation of their proficiency in the target language production. Some tips are given on how the English language teacher and the curriculum designer can influence the teaching process at Fourah Bay College and beyond.

Key words: Tension, English Language Proficiency, Communicative Competence, Traditional Grammar.
Introduction

English language is the official language of instruction in all levels of education in Sierra Leone. As a result, students in tertiary institutions are expected to have achieved a relatively high level of proficiency in English language. However, these students seem to sound stilted when they use English language beyond the classroom. Employers have therefore been complaining about what seems to be the level of incompetence of university students in the use of English language. This situation can be attributed to the fact that in West African schools and colleges, in spite of Grieve’s (1964) report on English Language Teaching (cited in de Turville) (1972) which (de Turville) describes as an eye-opener ‘for a revolution in English language teaching in West Africa. The focus of teaching English language is on routine discussions of grammatical rules which originated from Latin. For example, a preposition should not be used at the end of a sentence, a pronoun following a preposition should be in the objective case and the modifier ‘only’ should be close to what it modifies. This is evident in how Foundation Studies (an English module offered by all first-year students at Fourah Bay College) is taught. The reality is that English has its own grammar rules which would not fit into the framework of Latin. There is therefore a gap between what is taught in the classroom and what the learners experience in real-life situations. It is this anomaly that this study seeks to address.

The term error is used in this study to refer to a linguistic deviation from the norm which a native speaker of English may regard as correct. They can be related to Selinker’s (1972) view about Inter Language (IL) which is concerned with the second language learner’s knowledge of the grammar of the target language at a given time. This stems from his internalized knowledge of the second language which is manifested when he processes its input data. This IL is neither in tandem with the expectations of a speaker of the target language nor is it a true reflection of his native language. Selinker describes Fossilization as “surface linguistic material which speakers will tend to keep in their IL production performance, no matter the age of the learner or the amount of instruction he receives in the target language” (Selinker; 1972: 229). This implies that fossilisable structures have the potential of impeding the progression
of the learner’s IL. Selinker extends this linguistic phenomenon to ‘whole groups of individuals, resulting in the emergence of a new dialect ... where fossilized competencies may be the normal situation’ (Selinker, 1974:38 cited in Sridhar and Sridhar, 1992:98).

Communicative language teaching as espoused by Richards (2006) is used as the theoretical framework for the discussion in this study. This approach gives priority to communicative competence which is concerned with the ability “to use the language for meaningful communication” (Richards, 2006:3). Richards states that communicative competence comprises knowledge of aspects such as the use of the language for different purposes and functions, variations in the language based on setting and participants, the methodology relating to how to produce and comprehend different kinds of texts, and the ability to maintain communication in spite of one’s handicap as regards knowledge of the language. The speaker should therefore have knowledge of issues such as what to say and how to say it appropriately based on the situation, the participants, and their roles and intentions.

The works related to this study can be related to present-day English Language usage. They can be sub-categorised into the features that characterise spoken and written English Language usage and the new Englishes across the globe. These works contrast with the rules of the ‘Traditional grammar’ model which focus on literary rather than spoken language.


Carter R. & McCarthy M. (2006) cover both the spoken and the written English grammar usage, as do Biber, D. et al. (2002). In the same vein, Quirk, R. et al. (1972) eschew the ‘common core’ of educated English paying the attention instead to a comprehensive coverage of grammar. Similarly, in their opening chapter, Huddleston, R. & Pullum G. K. (2002) discuss inter alia ‘the spurious external justifications’ for rules that emanate from Latin. This is also true of Aarts, B. (2010) who does not follow the old Latinate rules on
the grounds that ‘the English Language is not a static entity but is continually subject to inevitable change which is reflected in its lexis and grammar. The New Englishes are highlighted in Schmied’s (1991) English in Africa: An Introduction, Turay’s (2017) A Survey of Sierra Leonean English, and Egbokhare’s (2003) ‘The Story of a Language: Nigerian Pidgin in Spatiotemporal, Social and Linguistic Context.’ Schmied (1991) examines the phonological, lexical, grammatical and discoursal features that typify African English. Turay (2017) also highlights the features that characterise the English of educated Sierra Leoneans across the four language levels. Egbokhare (2003:25) cites Jibril (1995:234) who states that ‘attitude towards Nigerian Pidgin among Nigerians range from adoration to disdain’. This means that while for example some have been describing the Pidgin as ‘bastardised’ or ‘broken’ English, others have called for its adoption as the lingua franca in some parts of the country. It can be deduced from the above that although the Traditional grammar rules are still being taught in some schools and colleges, many linguists do not recognize it because of its regional and stylistic differences from daily English usage.

Research Questions
The following research questions were raised to pilot this study:

1. What is the students’ attitude to grammatical usage of English language sentences?
2. What are the possible causes of the errors that you find in some of the sentences?

Methodology
The materials used in the research were the handouts used in teaching Foundation Studies at Fourah Bay College, the past question papers in the module and other related modules, some authoritative English grammar texts, and Jones’s The Freetown Bond (TFB) published by (James Currey, 2012). The research took the form of a tabular presentation involving the attitude of 80 first year students of Foundation Studies to sentences extracted from Eldred Jones’s TFB to know whether they considered them grammatically correct or not. The students passed the module in both semesters within 70% and above (A) and 65-69% (B+). The participants were selected from the four faculties that constitute Fourah Bay College, 20 were selected from Social Sciences and Law,
20 from Engineering and Architecture, 20 from Pure and Applied Sciences, and 20 from Arts respectively. The participants were required to explain situations where they perceived sentences as correct or erroneous. The source of the sentences was not shown to the participants to prevent the possibility of them making pre-conceived judgments. Furthermore, the perception test lasted for one hour in order to give participants the opportunity to complete the exercise.

The participants were asked to indicate whether they considered the grammatical usage in the following sentences relating to pronoun, preposition, modifier and sentence structure was acceptable or not by ticking the appropriate box in each case.

1. The only tired one was me (Eldred D. Jones; 2012).
2. Where could the funds have come from? (Eldred D. Jones; 2012).
3. ...but I and others felt that without such a basis we might be producing specialists, without a sound view of their world (Eldred D. Jones; 2012).
5. He and I only met later as our research interests brought us together... (Eldred D. Jones; 2012).
6. He took over as head of the department with Solomon Pratt, Godfrey Lardner and I among the final year students (Eldred D. Jones; 2012).
7. Bob Roberts and myself directed Henry IV Part I with Cyril Foray as Prince Hal and ... (Eldred D. Jones; 2012).
8. For Anglo Saxon (Old English), my tutor, F.W. Bateson (Freddy among his students) sent Allen Davies and myself ... (Eldred D. Jones; 2012).
9. Mr. Tregson -Robert subscribed to The Teacher's World from which he read to us the Frank Roscoe stories and encouraged us to read them ourselves (Eldred D. Jones; 2012).
10. Mr. Wilson accepted that English was very important in our lives as the language in which we would have to earn our living and in which everyone should strive to be competent (Eldred D. Jones; 2012).
11. The book had been entered without my knowledge by the Oxford University Press and I only knew of the award when
our landlord in Leeds, John Wood, came bounding down the stairs with a copy of the Guardian one morning, with congratulations (Eldred D. Jones; 2012).

12. As it turned out there were only two of us, Conton and myself – another liberating experience (Eldred D. Jones; 2012).

13. I watched football, went to dances at the Wilberforce Memorial Hall….. (Eldred D. Jones; 2012).

14. The gap year 1943/44 brought me into contact with very serious-minded family men….. (Eldred D. Jones; 2012).

15. Sheila Breman and I directed the Merry Wives of Windsor (Eldred D. Jones; 2012).

1.2. Results of the Findings

Results

The first research question in this study asks about the students’ attitude in relation to the grammatical usage in selected sentences from Eldred D. Jones’s text (2012).

Table 1 provides the answers to this question.

Table 1. The Participants’ Attitude to Grammatical Usage

<table>
<thead>
<tr>
<th>Attitude to Sentence</th>
<th>Number of Sentences</th>
<th>Percentage of Sentences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptable</td>
<td>6</td>
<td>40%</td>
</tr>
<tr>
<td>Unacceptable</td>
<td>9</td>
<td>60%</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 1 shows the subjects’ responses to the grammatical usage in the sentences. Out of the fifteen sentences, all the participants considered six (40.0%) to be acceptable. These were sentences four, nine, ten, thirteen, fourteen and fifteen. Also, all the participants viewed nine (60.0%) of the sentences as erroneous. The sentences that were identified as such were one, two, three, five, six, seven, eight, eleven, and twelve.
The second research question asks about the possible causes of what the students regard as erroneous sentences.

Table 2. Frequency of the Explanation for the Unacceptable Responses

<table>
<thead>
<tr>
<th>Explanation</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Grammar Explanation</td>
<td>73</td>
<td>91%</td>
</tr>
<tr>
<td>Non-Traditional Grammar Explanation</td>
<td>5</td>
<td>6%</td>
</tr>
<tr>
<td>No Explanation</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 2 showed that of the 80 participants, 73 (91%) of them identified the nine erroneous sentences did so based on their knowledge of traditional grammar rules while 5 (6%) gave non-traditional grammar explanations and 2 (3%) did not give any explanation. This manifests on how the subjects’ exposure to the rules of traditional grammar influenced their attitude towards English language sentences.

Discussion of Findings

In West African schools and colleges, the premium seems to be on monotonous discussions of grammatical rules making students suffer from what Leech and Svartvick (1991; describe as excessive “grammar fatigue”. For example, at Fourah Bay College, a constituent college of the University of Sierra Leone, English teachers do not play fast and loose with these rules. This is evident in the pattern which the test on “correct” usage seems to take where the students are asked to choose the correct alternatives:

Who will answer the first question?” I asked

"It’s (I/me)” Chernor replied.

(Fourah Bay College, Special Examination in English for Applicants to the Degree and Diploma Programmes of the Mass Communication Division, 2009:5)
Between you and (I, me, myself) I think there is something wrong here
(Fourah Bay College, Second Semester, Foundation Studies 5th August, 1: pm 2019: 5)

Adama is taller than (I, me,).
(Fourah Bay College, Second Semester Foundation Studies 5th August, 9: am 2019: 5)

The teacher only wanted to buy two books, not a dozen.
(Fourah Bay College, Second Semester Communication Skills, Examination for the Second Year Degree in Mass Communication Division, 2019: 4)

It can be noted, however, that the English rules that these students and possibly many of their counterparts in other countries have been taught may not be at par with what educated members of their societies including their teachers actually speak or write outside the classroom. This can be seen in Jones’s text. For example, the ‘errors’ in sentences 1 and 6 above constitute present day English which accepts a range of styles, from formal through neutral to informal. In recognition of these stylistic variations, Huddleston and Pullum (2002: 8) describe the following sentences as grammatically correct:
1a) It is clear whom they had in mind.
1b) It’s clear who they had in mind.
2a) It is I.
2b) It’s me.
3a) There is Doris Jones, for instance who I go with and Mary Plumb and the Forsters.

Biber et al. (2002) express a similar sentiment when they discuss the popularity of the accusative in conversation and the written registers: “Although the nominative form ... is traditionally considered correct after the copula be, the accusative form is the normal choice in practice.” Schmied, (1991) highlights the tendency to use formal registers in informal conversations as a feature of African English. Turay (2017) also examines this feature among educated Sierra Leoneans. This probably explains the possibility for the average Sierra Leonean and by extension the African to describe the first sentence above as erroneous.
With regard to the ‘error’ in sentence 7 above, Quirk et al. (1972) recognize the non-emphatic use of reflective pronouns in variation with personal pronouns. That is, even though the use of "myself" in the following sentences, in both conversational and the written registers, is felt by many speakers to be a hyper urbanism, a genteel evasion of ‘I’, they recognize it as part of English usage:

My brother and [I, myself] went sailing yesterday.

The same is also the case in relation to the ‘error’ in the sentences in 8 and 12 as is shown by Carter and McCarthy (2006:385): "These holidays are partly designed for people like yourself, fancy-free and unattached (or; these holidays are designed for people like you...)".

As regards the use of a preposition at the end of a sentence (see sentence 2), Huddleston and Pullum (2002:627) state that although this rule was prevalent in prestigious grammars by the end of the 18th century, and was extensively taught in schools in the 19th century onwards given the view expressed in all modern usage manuals, ‘it would be an absurdity to hold that someone who says What are you looking at? or What are you talking about? or Put this back where you got it from is not using English in a correct and normal way.’

With regard to the position of ‘only’ in sentences 5 and 11 above, Carter and McCarthy (2006:122) state that: "... the position of only varies, and often intonation or context is required to make clear what is modified by only". Huddleston and Pullum (2002:590) explain how context can help clarify the meaning of a sentence where the ‘only’ modifier is used by citing the following sentences which are considered grammatically flawed in prescriptive terms since “only” is not adjacent to the intended focus:

I only saw Granny at carefully placed intervals.

Boris doesn’t eat shanks so, of course, I only cook them when she’s away.

They consider the first sentence to be grammatically correct because since ‘saw’ and ‘Granny’ cannot be mistaken for the intended focus of the sentence even in the absence of contextual evidence, ‘only’ therefore need not be placed adjacent to the prepositional phrase to show that it is the intended focus. Similarly, they consider the second sentence correct because of the contextual information provided by the first clause and the connective ‘so’.
making the clause ‘when she is away’ the obvious intended focus. In the same vein, since the contextual evidence in sentence 5 shows that ‘met’ and ‘he/I’ are not potential candidates for the state of focus, it is not mandatory for ‘only’ to be placed adjacent to ‘later’. Also, in sentence 11 above, the context provided by the first clause and the coordinating conjunction ‘and’ makes it predictable for the clause ‘when our landlord in Leeds, Jordan Wood came…’to be the intended focus.

The ‘error’ in sentence 3 can be related to how messages are conveyed in English. That is, by highlighting certain parts of the content of a clause, the English speaker (writer) can show where he wants the focus to lie. Aarts, B. (2010: 316ff) discusses this phenomenon when he explains how speakers use syntactic choices in order to convey information to their addresses. Jones has extended this principle to the use of the compound subject where either the first person or the third person can take the first position (see sentences 3 and 4). In sum, what the subjects have described as errors constitute part of present-day English.

Recommendations

The following are recommended based on the findings of this study:

1. The main aim of the English teacher is to develop his learners so that they can be confident in their handling of everyday language for ordinary communication. This means that in addition to grammatical rules, the students must also know the conventions which involve the levels of formality of the language. This is what Ur (1991:78) means when he states that; ‘grammatical accuracy on its own is a dead end, unless used to receive and produce interesting and purposeful meanings within the context of real-life language use’. Therefore, instead of limiting the students to grammatical rules which will make them know more about the language than learn how to use it appropriately, the primary focus of the English teacher should be to enable his students to use appropriate vocabulary and structures in meaningful communicative contexts. He can achieve this goal by exposing his learners to meaningful activities where they can speak or write in English to fulfil a communicative need.
2. The curriculum designers who are normally concerned with the drawing up of teacher training syllabuses, examination syllabuses and the materials that should be used in the classroom have a significant role to play to address the language problem in the country. They select the books and courses that are expected to improve on the learners' linguistics competence. This is significant because in almost all of the six universities in the country, Literature is not a core module for most of the students. This means that apart from the students who specialize in English Linguistics, the others who form the bulk of the student population are at best familiar with English rules which are not reflected in real-life situations. It is high time curriculum designers introduced a syllabus in the schools and colleges wherein English was integrated with Literature which should reflect the learners' age and thoughts. By so doing, the learners will imbibe everyday language for ordinary communication as the basis for everything else.

Conclusion

This study has shown that although the type of teaching that the subjects are exposed to has possibly enabled them to identify correct English in present day English usage, there are several types of usage that are considered wrong which are typical of English speakers and writers around the globe. This does not suggest that teaching grammar is irrelevant; rather, it should not be done in such a way that the learners end up knowing more about the language than knowing how to use it appropriately. Knowledge of this appropriate language use means the appropriate use of vocabulary and structures in meaningful communication contexts. With this knowledge, the learner can, with facility, use everyday language for ordinary communication. Besides the development and recognition of native and non-native varieties of English has to some extent reduced the insatiable thirst for correct English language usage. This is because we now have an increasing number of people learning and using the language with some degree of proficiency. Native and non-native English speakers need to come to terms with this reality. What Kachru (1982) cited in Turay (2017:201 ff) describes as 'attitudinal adjustment' means among other things that non-native users of English should develop and identify themselves with their local model of English and should not view it as a 'deficient' model.
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Abstract
The study assesses the implications of sub-standard diets on the academic performances of adolescents in senior secondary schools in Lagos State. A survey research design was adopted for this study using 200 randomly selected respondents in senior secondary schools under the educational district IV in Lagos State. A validated questionnaire was used to obtain information on personal, socio-economic characteristics, dietary intake and academic standing of the respondents. The nutritional status was assessed through Body Mass Index (BMI). Data were analyzed using descriptive statistics and inferential statistics (t-test and Pearson correlation). The null hypotheses were tested at 0.05 level of probability. The highest factor that determined the substandard diets and the academic performance of the respondents was the socio-economic factor. Other factors such as nutritional awareness also contributed to the level of the academic performance and biological implications of the respondents. The results of the BMI revealed that the majority (50.5%) were in the underweight category. That is, below or <14 kg/m² (less than the 5th Percentile). Also, 48% of the respondents do not eat up to three square meals daily as revealed and the consumption rate of 91% daily cereals compared to a low 32.5% of protein. Fruits and vegetables, tubers and roots and legumes were less consumed by the respondents. An imbalance was noticeable in the diets of the respondents. The result of the academic performance of the underweight respondents tends to be within the average (50%). This research study hereby poses that there is a significant relationship between sub-standard diets and the academic performance of adolescents in senior secondary schools in Lagos State. It is recommended among other that there should be a
unit in the state’s secondary schools or education district where
students can visit to source information based on their nutritional
status. This would foster awareness of adequate diets for the
students.

**Key Words:** Sub-Standard Diet, Implication, Academic And
Performance

**Introduction**

Diet often implies the specific intake of nutrition for health or
weight-management reasons (Wikipedia). According to Barb
Leonard (2013), diet also refers to the food and drink a person
consumes daily and the mental and physical circumstances
connected to eating. Diet has been necessitated in growth and
development of all living organisms, particularly human beings.

Adolescents are described as individuals in a transmission
between childhood and adulthood occurring between 12 -18 years
of age. The World Health Organization (WHO) defined adolescents
as persons aged 10-19years of age. Adolescence is seen as a period
of rapid growth and development as a lot of changes come into being
here, so a lot of fundamental nutrition in form of sufficient diet is
mandated.

Poor diet is as old as man’s existence on earth. Nutrition
particular in protein and energy giving food which the World Health
Organization (WHO) referred to as silent emergency is an
accomplice in at least half of the 10.4 million Adolescents death each
year. According to Awake (2003), poor nutrition covers a wide
range of illnesses from under nourishment due to a lack of one or
more nutrients such as vitamins and mineral deficiency to obesity
and other diet related to chronic diseases. The World Health
Organization (2003) reported that poor nutrition is not limited to
children only. However, developed countries are not free from poor
nutrition. All cells need nutrients to grow and work. Lack of
vitamins, mineral calories and protein can weaken the immune
system and make it less able to find and destroy germs. This means
that people who are poorly nourished are more likely to develop
infection. People who are malnourished either do not take in enough
calories and nutrients, or the body can't use the food it takes in; that
way, it can weaken the immune system. Poor nutrition can affect
children performance in school and is consistently reported as one
of the causes of most deaths in Nigeria. However, poor nutrition occurs as a result of deficiencies in all food nutrients that are being consumed by humans in terms of quality and quantity of food intake. The diets of adolescents could be poor, substandard or inadequate if affected by multiple overlapping and interacting factors; physical, biological, socio-cultural, the environment and economy. Poor and substandard diets on adolescents denote impairment of health arising either from deficiency, excess or imbalance of nutrients in the body. However, the nature of diets influences growth and development of this group of people greatly, especially in the senior secondary school. The development process of adolescents is attributed to their kind of diet. Their cognitive and psychomotor developments are likely to be strangled and hindered by the diets if poor, malnourished and inadequate (Evit Ochel, 2006). If the Recommended Dietary Allowance of the major nutrients or classes of food are not meet, then various consequences erupt.

The American Dietetic Association (ADA) published a position paper regarding the nutritional needs of teenagers. This paper stated that the health of adolescents is dependent on normal dietary intakes and that the provision of foods that contain adequate energy and nutrients was essential for physical, social and cognitive growth and development. Adequate nutrient intake during adolescence is very important for many reasons. Adolescence is a particularly unique period of life because it is a time of intense physical, psychological and cognitive development. Adolescence is a transition phase to adulthood. The age of adolescence encapsulates a window of time when the human body is metamorphosing and evolving into that of an adult. It is a time when the adolescent tries to establish his own identify yet desperately seeks to be socially accepted by his peers (Lulinski, 2001). During adolescence, hormonal changes accelerate growth in height. Growth is faster than at any other time in the individual’s life except the first year. Increased nutritional needs at this juncture relate to the fact that adolescents gain up to 50% of their adult weight, more than 20% of their adult height and 50% of their adult skeletal mass during this period. The adolescent therefore faces series of serious nutritional challenges which would impact on this rapid growth spurt as well as their health as adults. However, the adolescent remains a largely neglected, difficult to-measure, hard-to-reach population. Consequently, the needs, particularly those of adolescent girls are
often ignored (Kurz and Johnson-Welch, 2001). At this developmental stages, protein requirements are maximal in addition to increased physical activity, combined with poor eating habit and other considerations.

The cognitive ability and behaviour in adolescents is dependent, proportional and can be grossly affected due to their diets and nutrition. Poor and substandard diets have severe implications for schooling adolescent, part of which have been traced to socio-economic status, demography and ethical practices among others. A latter effect of all this poses a great influence on the adolescence’s total performance.

**Statement of the Problem**

Adolescents require adequate and great amount of nutrients in their diets due to the rapid changes in development they experience. This phase calls for an increased demand for energy and nutrients. Diets and physical growth are integrally related; optimal diet is a requisite for achieving full growth potentials. However, because of the current socio-economic problems in developing countries like Nigeria, students are known to feed on substandard diets.

A large percentage of these adolescents barely meet half of their recommended dietary allowances each day. This prevalent issue has also been attributed to the increasing demography of the Nigerian homes. This has built a restricted feeding/nutritional intake for the adolescents as the available food has to be shared evenly among the other members of the household. A good number of adolescents thereby source for carbohydrates foods often and lesser of the protein foods given that they believe energy is all they need.

The availability of various ready to eat foods especially snacks and biscuits have been an option for these adolescents to imbibe in.

Poor nutritional choices and practices have been shown to increase during adolescence. The main nutritional problems affecting adolescent populations in particular include under-nutrition in terms of stunning and wasting. Others are deficiencies of micronutrients such as iron and Vitamin A, obesity and other specific nutrient deficiencies.

Lack of nutritional awareness of the adolescents and unavailability of adequate foods would contribute to poor and
substandard diets. This study is, therefore, undertaken to evaluate the implications of poor and substandard diets on adolescents in senior secondary schools in Lagos State district IV.

**Purpose of the Study**
The general aim of this study is to identify how substandard diets affect the academic performance of adolescents in senior secondary schools.

The specific purposes of the study are to:
1. Assess the extent or magnitude to which the adolescents consume adequate diets as against poor and substandard diets.
2. Determine the reasons for adopting poor and substandard diets among adolescents in senior secondary schools.
3. Examine the detrimental consequences these poor and substandard diets have on the adolescents’ academic performances.
4. Evaluate the biological/physical limitations that may arise from poor and substandard diets among adolescents in senior secondary schools.
5. Determine the level of nutritional awareness and consciousness of the adolescents.

**Research questions**
The following research questions will guide the study:
1. To what extent or magnitude do adolescents consume adequate diets as against poor and substandard diets?
2. What are the reasons for adopting sub-standard diets among adolescents in senior secondary schools?
3. What detrimental consequences do these sub-standard diets have on the adolescents’ academic performance?
4. What are the biological/physical limitations that may arise from sub-standard diets among adolescents in senior secondary schools?
5. What is the level of nutritional awareness/consciousness of adolescents?
Research Hypotheses
The following null hypotheses were formulated and tested at 0.05 level of significance:
Ho1: There is no significant difference between the socio-economic background and academic performance of the adolescents.
Ho2: There is no significant difference between the male students and female students’ consumption of poor and substandard diets.
Ho3: There is no significant difference between the academic performance and the biological/physical wellbeing of the students concerning their diets.
Ho4: There is no significant relationship between the nutritional awareness of the adolescents and their diets consumption.
Ho5: There is no significant difference between the age and extent to which poor and substandard diets are consumed among the adolescents.

Significance of the study
The result of this study would have both theoretical and practical significance. Findings of this study will also be useful to the Government, Nutritionists, Educationists, Teachers and students.

➢ The study is based on the assumption that it is to create awareness on the effects of poor diets on adolescents in senior secondary schools.
➢ The study is to provide some insight on the control of the reasons for adopting poor and substandard diets as a means of nutritional feeding.
➢ The study would be relevant to examine poor diets and its detrimental consequences on the academic performance of adolescents in senior secondary schools in Lagos district IV.
➢ The study will help to know the biological limitations/challenges that arise due to poor diets among adolescents in senior secondary schools.
➢ The study would determine the effectiveness on how this problem of poor and substandard diets will be reduced. The findings of this study will also add to extant literature for use by researchers.
Methodology
A survey research design was adopted for this study using 200 randomly selected respondents in senior secondary schools under the educational district IV in Lagos State. A validated questionnaire was used to obtain information on personal, socio-economic characteristics, dietary intake and academic standing of the respondents. The nutritional status was assessed through Body Mass Index (BMI). Data were analyzed using descriptive statistics and inferential statistics (t-test and Pearson correlation). The null hypotheses were tested at 0.05 level of probability.

Results
Table 1: Demographic characteristics

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEX</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>110</td>
<td>55</td>
</tr>
<tr>
<td>Male</td>
<td>90</td>
<td>45</td>
</tr>
<tr>
<td><strong>AGE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13-14 years</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>15-16 years</td>
<td>128</td>
<td>64</td>
</tr>
<tr>
<td>17-18 years</td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td>19 years and above</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td><strong>CLASS LEVEL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SS1</td>
<td>92</td>
<td>46</td>
</tr>
<tr>
<td>SS2</td>
<td>78</td>
<td>39</td>
</tr>
<tr>
<td>SS3</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td><strong>RELIGION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Islam</td>
<td>91</td>
<td>45.5</td>
</tr>
<tr>
<td>Christianity</td>
<td>105</td>
<td>52.5</td>
</tr>
<tr>
<td>Traditional</td>
<td>4</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>
The results contained in Table 1 shows that the female respondents (55%) out-numbered the male respondents (45%) in the sample population for this study. Most of the respondents (64%) were within the age group 15-16 years. 46% of the respondents were in SS1, 39% in SS11 while 15% were in SS111, the table further revealed the religion status of the respondents, majority were Christians (52.5%) while 45.5% and 2.0% practiced Islam and traditional religion respectively.

<table>
<thead>
<tr>
<th>TABLE 2: BODY MASS INDEX (BMI) OF THE RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
</tr>
<tr>
<td>Underweight (below 14 kg/m² &lt; 15 kg/m²)</td>
</tr>
<tr>
<td>Normal Weight (15 kg/m² - 18 kg/m²)</td>
</tr>
<tr>
<td>Overweight (18 kg/m² - 19 kg/m²)</td>
</tr>
<tr>
<td>Obese (above 19 kg/m²)</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Table 2 shows the Body Mass Index (BMI) of the respondents. It indicates that 50.5% of them are underweight that is they have their Body Mass Index (BMI) below or = 14 kg/m² (less than the 5th Percentile). 34.5% of the respondents fall between the normal weight /acceptable weight, that is between the 5th percentile and 85th percentile (15kg/m² - 18kg/m²).

It was seen that 14.0% of the respondents were overweight having percentiles ≥ 85th to 95th percentile (18kg/m² to 19kg/m²). Only 1.0% were seen to be obese having a BMI over 19 kg/m², that is greater than the 95th percentile. The result was compared to the World Health Organization (WHO) Body Mass Index for adolescents and children as shown in Table 3 (is this information correct? There is no Table 3).
<table>
<thead>
<tr>
<th>Weight Status Category</th>
<th>Percentile Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>Less than 5th percentile</td>
</tr>
<tr>
<td>Normal or Acceptable Weight</td>
<td>5th percentile to less than the 85th percentile</td>
</tr>
<tr>
<td>Overweight</td>
<td>85th percentile to less than the 95th percentile</td>
</tr>
<tr>
<td>Obese</td>
<td>Equals to or greater than the 95th percentile</td>
</tr>
</tbody>
</table>

Figure 2 (Where is Fig. 1?): Percentage distribution of Respondents by Body Mass Index

Analysis of Research Questions

Research Question 1:
To what extent or magnitude do adolescents consume adequate diets as against poor and substandard diets?

Dietary Intake and Recall
Table 4: How often do you consume the following?

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>FREQUENCY</th>
<th>PERCENTAGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food from Vendors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once in a day</td>
<td>77</td>
<td>38.5</td>
</tr>
<tr>
<td>Frequently</td>
<td>78</td>
<td>39</td>
</tr>
<tr>
<td>Occasionally</td>
<td>37</td>
<td>18.5</td>
</tr>
<tr>
<td>Never</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Breakfast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once in a day</td>
<td>43</td>
<td>21.5</td>
</tr>
<tr>
<td>Frequently</td>
<td>37</td>
<td>18.5</td>
</tr>
<tr>
<td>Occasionally</td>
<td>24</td>
<td>12</td>
</tr>
<tr>
<td>Never</td>
<td>96</td>
<td>48</td>
</tr>
</tbody>
</table>
### Implications of Sub-Standard Diets on...

#### Animal Protein

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Never</th>
<th>1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once in a day</td>
<td>65</td>
<td>32.5</td>
</tr>
<tr>
<td>Frequently</td>
<td>78</td>
<td>39</td>
</tr>
<tr>
<td>Occasionally</td>
<td>54</td>
<td>27</td>
</tr>
<tr>
<td>Never</td>
<td>3</td>
<td>1.5</td>
</tr>
</tbody>
</table>

#### Legumes

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Never</th>
<th>0.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once in a day</td>
<td>37</td>
<td>18.5</td>
</tr>
<tr>
<td>Frequently</td>
<td>119</td>
<td>59.5</td>
</tr>
<tr>
<td>Occasionally</td>
<td>43</td>
<td>21.5</td>
</tr>
</tbody>
</table>

#### Fruits and Vegetables

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once in a day</td>
<td>7</td>
</tr>
<tr>
<td>Frequently</td>
<td>59</td>
</tr>
<tr>
<td>Occasionally</td>
<td>34</td>
</tr>
<tr>
<td>Never</td>
<td>0</td>
</tr>
</tbody>
</table>

#### Cereals

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once in a day</td>
<td>91</td>
</tr>
<tr>
<td>Frequently</td>
<td>8</td>
</tr>
<tr>
<td>Occasionally</td>
<td>1</td>
</tr>
<tr>
<td>Never</td>
<td>0</td>
</tr>
</tbody>
</table>

#### Tubers and Roots

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once in a day</td>
<td>29</td>
</tr>
<tr>
<td>Frequently</td>
<td>49.5</td>
</tr>
<tr>
<td>Occasionally</td>
<td>21.5</td>
</tr>
<tr>
<td>Never</td>
<td>0</td>
</tr>
<tr>
<td>I eat less than three (3) meals daily</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>Once in a day</td>
<td>0</td>
</tr>
<tr>
<td>Frequently</td>
<td>97</td>
</tr>
<tr>
<td>Occasionally</td>
<td>68</td>
</tr>
<tr>
<td>Never</td>
<td>35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I eat up to three (3) meals or more daily</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Once in a day</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Frequently</td>
<td>74</td>
<td>37</td>
</tr>
</tbody>
</table>

1. There should be a unit in the state’s secondary schools or education district where students can visit to source information based on their nutritional status. This would foster awareness of adequate diets for the students.

0% for never. Tubers and roots consumption had 29% for once in a day, 49.5% for frequently being majorly consumed, 21.5% occasionally and 0% for never.

The results show that 48.5% of the respondents frequently ate less than three meals each day and 34% occasionally while 17.5% never ate less than that. It was also seen that 37% frequently ate up to three meals or more daily while 51% occasionally and 12% never ate up to that. The study reveals that 1.5% of the students frequently stayed without food for 24 hours, 10.5% occasionally and 88% had never been without food for 24 hours.

**Research Question 2**

What are the reasons for adopting poor and substandard diets among adolescents in senior secondary schools?
The research questions were analyzed with respect to items 11-15 of the questionnaire as below.

Table 5: Mean Score Rating on Socio-economic and Cultural Factors

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>Mean (x)</th>
<th>S.D</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>I take sub-standard diets due to insufficient money given to me.</td>
<td>2.60</td>
<td>1.09</td>
<td>Significant</td>
</tr>
<tr>
<td>12</td>
<td>I buy sub-standard foods because that is what I get to see around me.</td>
<td>2.56</td>
<td>1.02</td>
<td>Significant</td>
</tr>
<tr>
<td>13</td>
<td>I buy sub-standard foods because they are cheaper and more in quantity.</td>
<td>3.31</td>
<td>0.67</td>
<td>Significant</td>
</tr>
<tr>
<td>14</td>
<td>I buy sub-standard foods to eat as a result of my laziness to cook.</td>
<td>1.45</td>
<td>0.33</td>
<td>insignificant</td>
</tr>
<tr>
<td>15</td>
<td>My religion allows me to eat any form of food.</td>
<td>3.64</td>
<td>0.55</td>
<td>Significant</td>
</tr>
<tr>
<td></td>
<td>Total Average Mean</td>
<td>2.71</td>
<td>0.73</td>
<td>Significant</td>
</tr>
</tbody>
</table>

The results in Table 5 shows that the mean rating of items 11,12,13 and 15 are above the 2.50 benchmark while item 14 is below it. This indicates that the socio-cultural and economic factors are related to the diets of the students given the total average mean of 2.71, and this is above the 2.50 benchmark.

Research Question 3
What detrimental consequences do these substandard diets have on the adolescents’ academic performance?
Table 6: Mean Score Rating on Academic Performance

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>Mean (x)</th>
<th>S.D</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.</td>
<td>I do not concentrate in class when I do not eat adequate diets.</td>
<td>3.58</td>
<td>1.08</td>
<td>Significant</td>
</tr>
<tr>
<td>17.</td>
<td>My diets affect my current academic performance.</td>
<td>2.57</td>
<td>1.03</td>
<td>Significant</td>
</tr>
<tr>
<td>18.</td>
<td>I am among the ten (10) best students in my class in terms of academic performance.</td>
<td>2.22</td>
<td>1.16</td>
<td>insignificant</td>
</tr>
<tr>
<td>19.</td>
<td>My last term's percentage was up to 50% on a scale of 100.</td>
<td>3.32</td>
<td>0.77</td>
<td>Significant</td>
</tr>
<tr>
<td>20.</td>
<td>I will improve in my academics if my diets are enhanced.</td>
<td>3.90</td>
<td>0.30</td>
<td>Significant</td>
</tr>
</tbody>
</table>

The results from Table 6 shows that the average mean of 3.38 was seen as only item 18 was below the benchmark of 2.50. The result implies that a substandard diet is responsible for poor academic performance.

Research Question 4
What are the biological/physical limitations that may arise from substandard diets among adolescents in senior secondary schools?

Table 7: Mean Score Rating on Biological / Physical Implications

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>Mean (x)</th>
<th>S.D</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.</td>
<td>I feel less active when I do not eat adequate diets.</td>
<td>3.34</td>
<td>0.79</td>
<td>Significant</td>
</tr>
<tr>
<td>22.</td>
<td>I participate less in sports when I do not feed adequately.</td>
<td>2.39</td>
<td>1.07</td>
<td>Insignificant</td>
</tr>
</tbody>
</table>
I get tired easily when I skip meals. | 3.37 | 0.80 | Significant

I have an eating disorder due to not taking adequate diets. | 1.50 | 0.85 | Insignificant

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>Mean (x)</th>
<th>S.D</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.</td>
<td>I know what an adequate diet is comprised of.</td>
<td>3.13</td>
<td>0.66</td>
<td>Significant</td>
</tr>
<tr>
<td>26.</td>
<td>My parents / guardian do not really care about the standard of the foods I take.</td>
<td>2.73</td>
<td>0.89</td>
<td>Significant</td>
</tr>
<tr>
<td>27.</td>
<td>My teachers and school teach me and emphasize adequate diets.</td>
<td>2.23</td>
<td>0.55</td>
<td>Insignificant</td>
</tr>
<tr>
<td>28.</td>
<td>I read and watch programs on diets and food consumption regularly.</td>
<td>1.94</td>
<td>0.85</td>
<td>Insignificant</td>
</tr>
<tr>
<td>29.</td>
<td>I know well about adequate diet but do not practice it.</td>
<td>3.21</td>
<td>0.98</td>
<td>Significant</td>
</tr>
<tr>
<td>30.</td>
<td>I believe females are the ones that should be more concerned with adequate diets rather than males.</td>
<td>2.04</td>
<td>0.89</td>
<td>Insignificant</td>
</tr>
<tr>
<td></td>
<td>Total Average Mean</td>
<td>2.54</td>
<td>0.80</td>
<td>Significant</td>
</tr>
</tbody>
</table>

The Table 7 result shows that the total average mean of 2.65 is slightly higher than the 2.50 benchmark. The result implies that the diets still determine the biological and physical limitations of the students.

Research Question 5
What is the level of nutritional awareness/ consciousness of the adolescents?

Table 8: Mean Score Rating on Nutritional Awareness/ Consciousness
The results from Table 8 shows that the students/respondents somehow agreed that their diets were related to their nutritional awareness and consciousness. The benchmark of 2.50 was exceeded for items 25, 26 and 30. A total average mean of 2.54 was derived.

**Analysis of Research Hypotheses**

Hypothesis 1 (Ho1): There is no significant difference between the socio-economic background and academic performance of the adolescents.

In testing this hypothesis, the researcher employed independent t-test statistical tool.

**Table 9: t-test Statistics on the Significant Difference between Socio-economic Background and Academic Performance of Adolescents.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>D.F</th>
<th>t-cal</th>
<th>t-critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-cultural factor</td>
<td>200</td>
<td>4.02</td>
<td>4.8</td>
<td>398</td>
<td>22.32</td>
<td>1.96</td>
</tr>
<tr>
<td>Academic performance</td>
<td>200</td>
<td>12.25</td>
<td>2.6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(DF=398, Critical Value=1.96).

It could be seen that the calculated value of 22.32 is far greater than the critical value of 1.96 with degree of freedom (398) given at 0.05 level of significance. It means that the posited null hypothesis which states that there is no significant difference between socio-economic status and academic performance is rejected while the alternative hypothesis is upheld. It implies that there is significant difference between the socio-economic status and academic performance of the adolescents.

Hypothesis 2 (Ho2): There is no significant difference between the male students and female students’ consumption of substandard diets.
Table 10: t-test statistics on the significant difference between the male students and female

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>D.F</th>
<th>t-cal</th>
<th>t-critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male students</td>
<td>13</td>
<td>3.48</td>
<td>1.25</td>
<td>28</td>
<td>0.64</td>
<td>1.70</td>
</tr>
<tr>
<td>Female students</td>
<td>17</td>
<td>3.20</td>
<td>1.07</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(DF=28, Critical Value=1.70).

It is observed from the table above the calculated t-value is 0.64 while the critical t-value is 1.70. Since the calculated t-value of 0.64 is less than the critical t-value of 1.96 given 28 degrees of freedom and 0.05 level of significance. Consequently, the null hypothesis is accepted. Therefore, there is no significant difference between the male and female students’ consumption of poor and substandard diets.

Hypothesis 3 (Ho3): There is no significant difference between the academic performance and the biological/physical wellbeing of the students with reference to their diets

Table 11: t-test Statistics on the Significant Difference between the Academic Performance and the Biological wellbeing to their Diets.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>D.F</th>
<th>t-cal</th>
<th>t-critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic performance</td>
<td>120</td>
<td>2.92</td>
<td>0.004</td>
<td>119</td>
<td>5.23</td>
<td>1.96</td>
</tr>
<tr>
<td>Biological well being</td>
<td>120</td>
<td>2.98</td>
<td>0/947</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(DF=119, Critical Value=1.96).

From the Table 11 it was observed that the calculated t-value is 5.23 while the critical t-value is 1.96. The calculated t-value of 5.23 is significant since it is greater than the critical t-value of 1.96 given 148 degrees of freedom and 0.05 level of significance. Consequently, the null hypothesis is rejected while upholding the research hypothesis thereby implying that there is a significant difference
between the academic performance and the biological/ physical wellbeing of the students with reference to their diets.

**Hypothesis 4 (Ho4):** There is no significant relationship between the nutritional awareness of the adolescents and their diets consumption.

**Table 12: Pearson Product Moment Correlation Table on the Relationship between Nutritional Awareness and Diets.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>D.F</th>
<th>r-cal</th>
<th>r-critical</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td>200</td>
<td>198</td>
<td>0.70</td>
<td>0.19</td>
<td>Significant</td>
</tr>
<tr>
<td>Diets</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(DF=198, Critical Value=0.19).

Table 12 above revealed the relationship between nutritional awareness and diet consumption. The calculated value of 0.70 is greater than r critical value of 0.19, degree of freedom 198 given at 0.05 level of significance. It means that the formulated null hypothesis is rejected while the alternative hypothesis is obtained. There is significant relationship between nutritional awareness of the adolescents and their diets consumption.

**Hypothesis 5 (Ho5):** There is no significant difference between the age and extent to which substandard diets are consumed among the adolescents.

**Table 13: t-test Statistics on the Significant Difference between the Age and Substandard Diets of the Adolescents.**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>D.F</th>
<th>t-cal</th>
<th>t-critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>28</td>
<td>14.75</td>
<td>5.48</td>
<td>119</td>
<td>1.96</td>
<td>0.10</td>
</tr>
<tr>
<td>Female</td>
<td>38</td>
<td>15.90</td>
<td>5.01</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(DF=119, Critical Value=0.10).

The data in Table 13 above shows a slight difference in the mean age of male (14.75) and the mean age of female (15.90) students, hence
this indicates that there is a very little difference in the achievement of male and female students age and their consumption of poor and substandard diets which indicates that age will not influence the consumption of poor and substandard diets among adolescents.

Summary of Findings
Based on the results of the data analysis, the following findings emerged:

1. There is significant difference between socio-economic status and academic performance of the respondents. The various socio-economic factors all contribute and have effect on the respondents’ academics. Thus, their performance is affected.

2. Consumption of substandard diets is not gender based. It is consumed by both the male and female respondents.

The Body Mass Index reveals that 50.5% of the respondents were underweight that is they had their Body Mass Index (BMI) below or \(\leq 14 \text{ kg/m}^2\). 34.5% of the respondents fall between the normal weight / acceptable weight (15kg/m\(^2\) -18kg/m\(^2\)), 14.0% of the respondents were overweight (18kg/m\(^2\) to 19kg/m\(^2\)). Only 1.0% were seen to be obese having a BMI over 19 kg/m\(^2\). The results were compared to the World Health Organization (WHO), Body Mass Index for adolescents and children.

3. Academic performance is in direct relationship with diet which is a determinant factor in adolescents. It can be deduced that they are in direct proportion to one another.

4. The biological and physical wellbeing is in relationship with the diets of adolescents. Those with normal BMI which is within the acceptable body mass index are seen to consume less of substandard diets.

5. Inadequate diets were being consumed regularly by a larger population of the sample. 50.5% of the respondents were underweight implying that the consumption of substandard diets is slightly above the average.

6. There is noticeable relationship between the nutritional awareness of the adolescents and their diets consumption. A
good number of the respondents tend to have a low knowledge and exposure to adequate diet.

7. Age will not influence the consumption of poor and substandard diets among adolescents. The result shows that the adolescents in their various ages consumed substandard diets.

8. Parents and teachers had not been effective in the nutritional status of the adolescents. The result shows that the diets of the adolescents had not been of best concern and priority to the parents and teachers.

Discussion of findings
Findings from the study revealed that there is significant relationship between socio-economic status and academic performance of the respondents. The various socio-economic factors in a developing nation like Nigeria contribute to the low level of living of adolescents.

These factors had effects on the students' health and thus their academic performance was affected. As seen in the result that shows that 48.5% of the correspondents frequently ate less than three square meals each day and 34% occasionally while 17.5% never ate less than that. Inability to feed adequately would hinder academic performance as those affected tend to be below the 50% average.

The significant difference in this is clearly shown in hypothesis one of this research. Children who do not consume adequate amounts of key nutrients, including calcium, potassium and vitamin C may be unable to work to their full potential at school (Nabarro et al. 2012).

Findings in hypothesis two deduced that the consumption of substandard diets can be attributed to both the male and female students of this study. Kialmar (2002) opined that gender is not a strong determinant for bases including socio-economic, dietary and environmental factors. Both the respondents (in terms of males and females) have been inherent in the consumption of substandard diets. It was seen that a percentage of 55% were presumably females and thus amounting to the increased consumption of substandard diets.

Findings further indicate that 50.5% of them were underweight that is they had their Body Mass Index (BMI) below or
14 kg/m² (less than the 5th Percentile). Guanyt (2008) opined that BMI is in direct proportion to the constant consumption pattern and nutrient assimilation of individuals at a given period of time.

The food habits of the respondents indicate that majority of the respondents, 51% ate twice every day, while only 37% (few) ate thrice and 12% more than thrice in a day. Larger percentage of the respondents agreed that students in the secondary school lacked adequate eating and poor dietary patterns.

The food assessment table shows that most of the respondents did not consume animal protein everyday (meat, fish) as necessitated / required daily this is not surprising because animal protein is more expensive than plant protein in study area.

Findings further shows that majority of the respondents had a poor level of awareness and information about the adequate diets which ought to be taken. The nutritional consciousness of the respondents is not effective. Research indicates that both the teachers and parents do not emphasize the concept of adequate diets enough. This is intricate against the academic performance and physical status of the respondents.

Conclusion
According to the result of this study, it was shown that majority (50.5%) of the students of senior secondary school in Lagos education district IV were not within the normal Body Mass Index (BMI) but below it. There is an incidence of underweight due to poor eating habits and also substandard diets due to socio-economic reasons, lack of nutritional awareness being most prominent among them all.

Part of their poor consumption of diets includes the high intake of cereals and lesser of animal proteins, legumes and also fruits and vegetables. There was an incidence of underweight (50.5%) due to poor eating habits and also overweight (1.0%) in a very few due to lack of expenditure of energy to attain an ideal body weight. This indeed has made the academic performance of the adolescents at a low standing (majorly below 50%).

The physical health is not left out but also endangered as the result has been revealed through the Body Mass Index. These factors militate against the good health and proper academic performance of the secondary school students.
Recommendations
Consequent upon the findings of the study, it is hereby recommended that:

1. Throughout adolescence, the importance of good eating habits cannot be over emphasized; hence the need for nutritional welfare of secondary school adolescents.

2. There should be a body/unit in the state’s secondary schools that will always investigate and make sure that all the vendors in the school premises sell nutritious food to the students.

3. There should be a unit in the state’s secondary schools or education district where students can visit to source information based on their nutritional status. This would foster awareness of adequate diets for the students.

4. Teacher – parents’ relationships should be regular to ensure that the adolescents take up to the Recommended Dietary Allowance (RDA) both in school and at home. This will promote proper growth and development; monitoring should be done both by the teachers and parents concurrently.

5. Corrective measures should be engaged for the underweight and also the obese to put them in track of a normal Body Mass Index.

6. A course in Nutrition can be introduced into the secondary school curriculum as one of the general courses to be taken by every student irrespective of their class or department.

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Brown, J.E (2009). *Nutrition through the life cycle.* Wadsworth, a division of Thomson Learning, United States of America


Abstract
This paper examines the opinion of teachers on gamification of Mathematics as an instructional strategy in teaching Mathematics in Nigeria public primary schools. The need for this study was due to the observed declining performance of pupils in Mathematics at internal and external examinations which has been a matter of great concern to many educators. Many of the Mathematics teachers attribute this to the abstract nature of the subject and the teaching method (s) adopted. This study therefore attempts to seek the opinion of primary schoolteachers in gamifying Mathematics teaching as a way of improving Mathematics teaching in primary schools in Ondo metropolis. A descriptive survey study was used and guided by one (1) research question and two (2) hypotheses. A random sampling of 300 Mathematics teachers in Ondo metropolis was used as sample for the study. An instrument titled "Gamifying Mathematics Teaching in
Nigerian Primary Schools Questionnaire (GMTINPSQ)” was used for the study. Data collected was subjected to both descriptive and inferential Statistics namely; percentages, mean, Standard Deviation and T. test. Findings revealed that gamification is welcomed by all the teachers sampled as it will help to simplify the teaching of Mathematics in Nigeria primary schools.

Key Words: Gamification, Teachers, Sustainable, and Development

Introduction
Science as a concept and its understanding is premised on some fundamental science-based subjects like Chemistry, Mathematics, Biology and Physics. The importance of Mathematics to everyday living cannot be over emphasized. It is a necessary tool needed to be able to function effectively in the society. There is no doubt that an individual can sometimes operate in the society without knowing how to read and write. However, such an individual cannot operate effectively in the society without knowing how to count, measure, add and subtract, which are various applications of Mathematics. This is well summarized in the opinion of Akinsola, Okanlawon and Ajani (2014) that the importance of Mathematics goes beyond its contributions to scientific and technological development. It also includes its utilization in daily interactions at the market places, transportation, in business transactions and all sorts of areas in which it is used by both literate and illiterate members of the Nigerian society.

Mathematics is seen as the foundation of the scientific and technological knowledge that is vital in social-economic development of any nation (Eze, 2007; Alamu, 2011). Greater emphasis has been placed on industrial and technological development across the world, but this cannot be achieved without a sound foundation in Mathematics (Alamu, 2011; Kuku, 2012; Ibrahim, 2017). To this end Mathematics is made a compulsory subject at both the primary and secondary levels of education in Nigeria (Federal Government Nigeria, 2013).

The subject being abstract is one thing and the learner being capable of learning abstract things is yet another issue. For instance, cognitive scientists have shown variously that most learners are not able to reason abstractedly at certain maturity age thereby finding learning materials that are abstract in nature or demanding formal
reasoning difficult (Achor, 2004; Prosser, 1983; Shayer & Adey, 1981). In addition, scholars have also identified and reported factors that pupils encountered in instructional process of this subject, such as poor methods of teaching applied by the teachers in the classroom (Etuk, Afangideh & Uya, 2013) and teachers’ non-use of relevant instructional materials in the teaching of Mathematical concepts (Popoola & Olarewaju, 2012). Of all these factors, the teachers’ factor is considered the most prominent and important in this study.

The instructional methods used by teachers of Mathematics play an important role in the understanding of instructional contents for meaningful learning and development of necessary skills. Teacher-centered instructional methods have been criticized for failing to prepare pupils to attain high achievement level in Mathematics thereby making pupils passive with less interaction (Emaiku, 2012). This teacher-centered method does not encourage pupils’ interaction and engagement in the classroom. This method needs to be enhanced with technology-based instructions that could actively engage pupils in the instructional process and help them in gaining mastery of the subject.

In teaching and learning Mathematics in Nigeria, the method used by the teachers is very important, as this affects the interest of the students, the level of pupils’ participation and their learning outcomes. Ibebuike (2006) has noted that many students, even as far back as their primary school days did not have interest in Mathematics to a meaningful degree; remarking that the methods of instruction deployed were not very favorable to these students. He posited that this was due to the paucity of competent and adequately qualified Mathematics teachers who were invariably over labored. Daso (2013) has noted that, there is significant relationship between the teachers’ method of teaching and pupils’ performance in Mathematics. There are many available teaching methods such as (play-way, project, discussion, demonstration, discovery, guided inquiry, problem-solving, and laboratory. Others are: cooperative learning, mastery learning, target task approach, multiple intelligences teaching, team teaching, computer-mediated instruction and individualized instruction). Nevertheless, not all are really suitable in every case to teach Mathematics topics, because of the abstract concepts of the subject but it could be overcome with
the appropriate use of technological tools or technology-based strategies that could motivate pupils and stimulate their interest in Mathematics.

This study, therefore examines the opinion of teachers’ in gamifying the teaching of Mathematics in Nigerian primary schools with planning implications for sustainable educational development in Nigeria.

Statement of the Problem
The teacher centered methods of instruction have been proven to be a poor instructional method adopted by primary school teachers which cannot allow mastery of the contents on the part of the pupils. Methods employed by the teachers are, usually devoid of appropriate technology integration, which cannot provide support for pupils’ interaction and engagement. Researchers have made efforts to improve teaching methods of Mathematics teachers at the primary school level of education with different modes of computer-based instructions such as computer-assisted instructions, blended learning, flipped classroom and digital games, among others. These are the instructional challenges that could be surmounted with the appropriate integration of gamification into classroom activities. This could have ripple effects on pupils’ mastery of the subject. Teachers could therefore, leverage the capabilities of game elements in gamification to solve the fundamental challenges in the teaching and learning of Mathematics in Nigerian public primary schools. This study, therefore seeks the opinion of teachers’ in the use of gamification in teaching of Mathematics at primary school level of education.

Literatures Review
Studies have revealed that the retention rate of students using technology in their learning is up to 30% greater than the rate achieved by students using the traditional method (Lawlor, Marshall and Tangney, 2015; Oguntunde, 2014; Ozdamli, Karabey and Nizamoglu, 2013; Okoye, 2010; Lee 2008). However, effective Mathematics learning goes beyond passive acquisition of knowledge transmitted to learners. Rather, understanding in Mathematics occurs through individual constructions and interactions with the natural and physical world and through a social process of communicating with others in a Mathematical form (Tella, 2013).
In this wise, pupils would not be motivated to learn the instructional content, and this could result to loss of interest in the subject matter. These challenges can easily be overcome with the appropriate use of technological tools or technology-based strategies that could motivate pupils and stimulate their interest in Mathematics. The use of ICT in teaching and learning of Mathematics early at the basic level of education could help develop learning prospects, access to educational tools and simplify the educational process.

One of the emerging technologies that could be used by Mathematics teachers to overcome the challenges of the teacher centered method at basic level is gamification. Werbach and Hunter (2012) define gamification as the use of game elements and game design techniques in non-game contexts. It is based in the success of the gaming industry, social media, and decades of research in human psychology. The main objective of gamification is to increase the participation of a person during an activity and provide motivation by integrating game elements such as prizes, awards and leader boards. Basically, any task, assignment, process or theoretical context can be gamified (Werbach& Hunter, 2012).

Gamification involves the use of game elements that could motivate learners and arouse their interest to participate actively in the instructional process (Werbach and Hunter 2012). In other words, the challenges of teacher centered method of teaching could easily be confronted with the effective use of gamification to deliver instructional content at basic school level. Gamification allows the use of game elements in instructional delivery. The game elements are the regular design of patterns that are used to design games. Some of these elements, sometimes described as components, as seen in most computer games nowadays, include: points, badges, leaderboards, storytelling, progress bars/progression charts, performance graphs, quests, levels, avatars, social elements, and rewards.

Traditional schooling is perceived as ineffective and boring by many students. Although teachers continuously seek novel instructional approaches, it is largely agreed that today’s schools face major problems around student motivation and engagement (Lee & Hammer, 2011). The use of educational games as learning tools is a promising approach due to the games’ abilities to teach
and the fact that they reinforce not only knowledge but also important skills such as problem-solving, collaboration, and communication. Games have remarkable motivational power; they utilize a number of mechanisms to encourage people to engage with them, often without any reward, just for the joy of playing and the possibility to win. Creating a highly engaging, full-blown instructional game however is difficult, time consuming, and costly (Kapp, 2012a).

The use of educational games as learning tools is a promising approach due to the ability of games abilities to teach and the fact that they reinforce not only knowledge but also important skills such as problem-solving, collaboration, and communication. In more recent years, the use of computer games in learning has become more widespread and various, including the use of games in basic ways, such as an initial stimulation for discussion, games for drill-and-practice), or where the game is used as an extrinsic reward for learning. However, there are also examples of more sophisticated usage, including games as central components of curricula (Squire & Barab, 2004) and collaborative learning through gaming (Vogiazou & Eisenstadt, 2005).

Lee & Hammer (2011) believed that gamification, in the coming years, will be a part of students’ lives and it can play an important role in making students to perform better in academic as well as real life if motivation and potential of gamification is directed towards education and learning. There are many opportunities to implement the concepts of gamification within learning, both in traditional learning environments and, especially, in their electronic counterparts. However, to encourage meaningful learning experiences requires considerable thought about what is appropriate for the learners and the context. This is essentially the same as designing learning activities more generally, and gamification should be considered during this same design stage. Gamification is used to change behavior, to educate, or to motivate.

Jackson (2009) created a game-like structure for an educational technology course, restructured her class as a game around a series of design assignments. In this environment, students could submit their assignments multiple times which was a triumph for the learners because it changed mistakes to learning opportunities, gave students more opportunities to practice based on feedback, and allowed learners to take more risks. The learners
also leveled up by earning a certain number of points before moving on to the next assignment which enabled them to build skills for the next assignment thus providing well-ordered problems. Offering three levels of expertise: proficient, expert, or guru, the structure added the element of adaptivity, allowing students to learn at the edge of their regime competence ‘and use their self-knowledge.

Starkey, Klein, and Wakeley (2004) have proved that Mathematics intervention for young children significantly promotes young kids’ mathematical knowledge. This implies that gamification can help children develop quality mathematical skills; thus, gamification as an intervention will help improve the teacher-learner gap that exists in the teaching and learning of lower primary Mathematics in primary schools. Gilmour (2011) in his study at the University of Southern California School (USC) of Cinematic Arts developed a trans-medial ARG card and web-based game that enabled learners to create collaborative media projects such as films, games, events, or other artwork which offered a unique way of getting to know each other. The overwhelming majority of the learners that participated in the voluntary game gave the faculty reason to play it again in 2012. All teachers confirmed that this game is a useful example of how a simple core mechanic- exchanging cards - can create a complex game with multiple possibilities for creating projects and interacting with fellow students. Kolo and Ojo, (2005) in their study on instructional learning reported that learning becomes more effective when learners learn in a collectively way. In addition, Ajewole, (1995), Hayes, (1997), Ogunkola, (2004) investigations on classroom management for effective teaching reported that old teachers have over the years exhibited coping strategies in welcoming innovations in the teaching and learning process which pave way for effective teaching and classroom management.

Research Question

1. What is the teachers’ opinion in gamifying the teaching of Mathematics?
Hypotheses

1. There is no significant difference between the perception of male and female teachers on gamifying the teaching of Mathematics in Nigerian public primary schools?

2. There is no significant difference between the perception of old and young teachers on gamifying the teaching of Mathematics in Nigerian public primary schools?

Significance of the study

This study would provide an intervention that could demystify teacher centered methods used in public primary schools in the teaching and learning of Mathematics so as to gain mastery of the subject by the pupils. The improved knowledge could result into better academic achievement at the basic level of education. It is also expected that this study would provide a suitable platform for educational policy makers to integrate appropriate technological tools into basic level curriculum. Finally, the findings from this study are expected to provide an empirical data on the implications of the game elements in mathematical instruction.

Methodology

Design: Descriptive survey research design was employed in carrying out this study. This type of design investigates, analyse and interpret existing conditions. Teachers' perception on gamifying the teaching of Mathematics in Nigeria primary schools fall within the descriptive survey research. Data collected were subjected to statistical analysis.

Population: This is the total collection of the specified group for the study. In this context, the study population comprises of all the one hundred and four (104) existing public primary schools in Ondo West Local Government Area of Ondo state, Nigeria.

Sample and sampling technique: The sample used for this study consisted of teachers from public primary schools in Ondo West Local Government Area of Ondo, Ondo State, Nigeria. Using simple random sampling technique, 70 public primary schools were selected out of the existing one hundred and four primary schools in the L.G. A given a sample percentage of 67.%. From the schools selected, a total of 300 teachers were sampled using stratified
random sampling techniques based on the following strata: Old and young, male and female. Those teachers with teaching experience for more than five years were regarded as old teachers while teachers with teaching experience of five years and below were regarded as young teachers.

**Instrumentation:** The instrument used was a questionnaire developed by the researchers titled “Gamifying Mathematics Teaching in Nigerian Primary Schools Questionnaire (GMTINPSQ)”. It consisted of two sections. Section A probe for basic information about the teacher’s and their experience while section B consisted often items designed to determine the perception of teachers on gamifying the teaching of Mathematics in Nigerian public primary schools. The items were placed against a two-point Likert scale of – Agree (A) and Disagree (D). The validity of the instrument was ensured through rational analysis of the items on the instrument by some experts in Educational Management and Test Construction. The reliability of the questionnaire was tested using test-retest method on five schools that were not part of the sampled schools and the reliability coefficient obtained was 0.85; this was found highly reliable.

**Data Collection and Analysis:** Data collected were collated and analyzed using percentages, mean, standard deviation and t-test statistics. For decision in respect of teachers’ perceptions regarding the gamification of Mathematics teaching in Nigeria public primary schools the criterion means was taken to be above 50%, therefore any item with a mean score of 50% was taken as an accepted opinion poll in respect of the item.

**Results**

Research Question
What are the perceptions of teachers as regards gamifying the teaching of Mathematics in Nigerian primary schools?
The response to the above question is presented on table 1 below:
Table 1: Frequencies and percentages of teachers’ perception as regards gamifying the teaching of Mathematics in Nigerian public primary schools?

<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Frequency</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>Games elements will have remarkable motivational power on the learning of Mathematics.</td>
<td>220</td>
<td>73</td>
</tr>
<tr>
<td>2</td>
<td>Gamification will promote pupil’s retention</td>
<td>195</td>
<td>65</td>
</tr>
<tr>
<td>3</td>
<td>Gamification will help to simplify abstract concepts in Mathematics</td>
<td>201</td>
<td>67</td>
</tr>
<tr>
<td>4</td>
<td>Computer competence and versatility of teachers will assist in gamifying the teaching of Mathematics</td>
<td>220</td>
<td>73</td>
</tr>
<tr>
<td>5</td>
<td>Gamification will make learning fun for pupils</td>
<td>198</td>
<td>66</td>
</tr>
<tr>
<td>6</td>
<td>I am not sure of my ability to use gamification in teaching Mathematics</td>
<td>98</td>
<td>33</td>
</tr>
<tr>
<td>7</td>
<td>Gamification will offer learners opportunity to interact among themselves</td>
<td>201</td>
<td>67</td>
</tr>
<tr>
<td>8</td>
<td>Gamification will reinforce not only knowledge but also important skills such as problem-solving, collaboration, and communication in pupils.</td>
<td>191</td>
<td>64</td>
</tr>
</tbody>
</table>
Gamifying Mathematics will be difficult, costly and time consuming.

Gamification should be implemented into primary school Mathematics curriculum.

Table 1 shows the perception of primary school teachers in Ondo West LGA in Ondo state on gamification of Mathematics teaching. From the table, response to the first question shows that 220 or 80% of the teachers sampled supported the item that games elements will have remarkable motivational power on the learning of Mathematics. Their responses to item 2 from the table shows that 65% of the teacher sampled agreed that gamification will promote pupil's retention. In addition, the responses on the statement that gamification will help to simplify abstract concepts in Mathematics, showed that 67% of the teachers sampled agreed with this statement.

Seventy three percent (73%) of the sampled teachers agree with the statement that computer competence and versatility of teachers will assist in gamifying the teaching of Mathematics. On item 5; 66% of the teachers agreed that gamification will make learning fun for pupils. Likewise, to the above, 67% of the teacher perceived that they were not sure of their abilities to use gamification in teaching Mathematics. On whether gamification will offer learners opportunity to interact among themselves; 67% of the sampled teacher sampled perceived that gamification will offer learners opportunity to interact among themselves. Also 64% of them perceived that gamification will reinforce not only knowledge but also important skills such as problem-solving, collaboration, and communication in pupils while 75% agreed that Gamifying Mathematics will be difficult, costly and time consuming. Lastly, 66% of the sampled teachers perceived that gamification should be implemented into primary Mathematics curriculum.

All these finding support those of Werbach & Hunter(2012), Lee & Hammer, 2011,Kapp, (2012), (Lawlor, Marshall and Tangney, 2015; Oguntunde, 2014; Ozdamli, Karabey and Nizamoglu, 2013; Okoye, 2010 whose study revealed that gamification could motivate...
learners and arouse their interest to participate actively in the instructional process. The finding also corroborates with Miller and Robertson, (2010) on the application of ICT in Mathematics instructions early at basic level could help expand learning opportunities, access to educational resources and facilitate the education process on the statement that gamification will help to simplify abstract concepts in Mathematics, 73% of the sampled teachers agreed with this statement. This support Starkey, Klein, & Wakeley (2004) whose study proved that Mathematics intervention for young children significantly promotes young kids’ mathematical knowledge. This implies that gamification can help children develop quality mathematical skills; 75% of the sampled teachers perceived that gamifying Mathematics will be difficult, costly and time consuming. This finding support (Kapp, 2012) whose study revealed that creating a highly engaging, full-blown instructional game is difficult, time consuming, and costly.

Hypotheses
1. There is no significant difference between male and female teachers’ perception on as regards gamifying the teaching of Mathematics in the Nigerian public primary schools?

Table 1
Difference between male and female teachers’ perception on gamifying the teaching of Mathematics in Nigerian public primary school.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>Df</th>
<th>t.cal.</th>
<th>t. critical</th>
<th>Probability level</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>150</td>
<td>36.42</td>
<td>7.68</td>
<td>298</td>
<td>0.015</td>
<td>1.86</td>
<td>0.05</td>
<td>Ns</td>
</tr>
<tr>
<td>Female</td>
<td>150</td>
<td>40.48</td>
<td>4.89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NS = Not Significant.

Table 1 reveals the perception of male and female teachers on gamifying the teaching of Mathematics in Nigerian public primary school. The means representing male and female teacher perceptions are 36.42 and 40.48 respectively. However, the t calculated value of 0.015 is lower than the critical value of t. This is 1.86. The finding revealed that there is no significant difference in male and female teachers’ perception on gamifying the teaching of Mathematics in Nigerian primary school.
The above findings confirm Gilmour (2011) in his study at the University of Southern California School (USC) of Cinematic Arts which developed a trans-medial ARG card and web-based game that enabled learners to create collaborative media projects such as films, games, events, or other artwork which offered them a unique way of getting to know each other. According to him, all teachers confirmed that this game was useful example of how a simple core mechanic- exchanging cards - can create a complex game with multiple possibilities for creating projects and interacting with fellow students.

2. There is no significant difference between old and young teachers’ perception on gamifying the teaching of Mathematics in Nigerian public primary schools?

Table 2.
Difference between old and young teachers’ perception on gamifying the teaching of Mathematics in Nigerian public primary schools?

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>X</th>
<th>SD</th>
<th>Df</th>
<th>t. cal.</th>
<th>t. critical</th>
<th>Probability level</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old</td>
<td>150</td>
<td>41.82</td>
<td>4.48</td>
<td>298</td>
<td>8.06</td>
<td>1.96</td>
<td>0.05</td>
<td>S*</td>
</tr>
<tr>
<td>Young</td>
<td>150</td>
<td>31.54</td>
<td>7.68</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

S* = Significant at P > 0.05

From table 3, the means representing the perceptions of old and young teachers on gamifying the teaching of Mathematics in Nigerian public primary schools are 41.82 and 31.54 respectively. The t. calculated value is 8.06, which is higher than the t. critical value of 1.96 at 0.05 probability level and this suggests a significant difference between the perceptions of young and old teachers. This finding corroborates with Charness, Schumann and Boritz (1995) result which showed that young teachers had a high level of competence in using technology packages than old teachers.
Implications of the study on Sustainable Educational Development

The sustainable development 4(SDG) 4 and its set targets indicators are all about sustainable educational development and qualitative education service delivery. In achieving this, educational planners need to come up with an action plan on the best way to respond to all the multifarious needs within the school system including instructional strategies by teachers. The following steps will go a long way in achieving this;

1. The identification of policy-related questions that are faced by mathematics teachers’ / education managers (operating at different levels of an education system) when they are aiming to improve the quality of education delivery;
2. The prioritization of these questions and precise linkage of them to potential future policy decisions at the appropriate decision-making level to improve teaching and learning at different levels of an education system;
3. The use of these questions in order to: (i) identify what relevant information is available in schools to promote teaching and learning (ii) indicate what new information need to be acquired, (iii) eliminate redundancies due to overlaps in existing information, and (iv) terminate “traditional”, but rarely-used information in ensuring the functionality of the new information;
4. The detailed specification of the quality indicators that need to be assessed;
5. The collection, analysis, and preparation of appropriate data according to acceptable scientific standards and the creation of appropriate data archives that will be readily accessible for later secondary analyses;
6. The linkage of suitable information dissemination procedures with both the policy questions posed initially and the decision-making levels at which the policy decisions will be taken in promoting effective teaching and learning in schools;

All this will pave way for successful implementation of gamifying Mathematics teaching and learning in Nigerian public primary schools, which will further enhance educational productivity.
Conclusion
From the findings of this study, one can conclude that gamifying the teaching of Mathematics is a better preference for teachers in Nigerian public primary schools. The findings also cast some doubts on the skills of the teachers in handling gamification of mathematics teaching as well as its implementation probabilities based on the assumption that it is difficult, costly and time consuming.

Recommendations
Based on the findings from this study, the following recommendations are hereby made:

1. Primary school Mathematics should be gamified to enhance its level of motivation and achievement on primary school pupils.
2. Government should implement the integration of gamification packages in the Mathematics curriculum.
3. Primary school teachers should be trained on the usage of computer-based game package to effectively use gamification package and;
4. Basic Mathematics concepts should be gamified and used for instructions in order to promote Mathematics teaching effectiveness.

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Kapp, K. M 2012: The Gamification of Learning and Instruction: Game-based Methods and


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IMPACT OF COLLABORATIVE LEARNING ON THE ACHIEVEMENT OF STUDENTS IN BASIC TECHNOLOGY IN LAGOS STATE, NIGERIA

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Abstract
In recent years, collaborative learning method has attracted the attention of many educators, representing an alternative to the traditional learning methods. There is need to examine the impact of collaborative learning on students’ academic achievement in Basic technology. This study was structured to critically examine the impact of collaborative learning on the academic achievement of students in Basic technology. This research work consists of four research questions and two hypotheses while quasi-experimental research design was adopted and Basic technology achievement test was administered to the students. 150 students were selected from five schools in the educational district II in Lagos State. The data were analyzed with the aid of percentages and t-test statistical tool. The findings of the studies showed that there is significant difference in the academic achievement of students who are exposed to collaborative learning on the arithmetic skills of students in Basic technology. In addition, there is no significant relationship in the effectiveness of collaborative learning on Students achievement in Basic Technology based on gender. It is recommended that secondary school teachers should adopt collaborative learning method in their teaching-learning strategies to improve the academic achievement of the students.

Keywords: Collaborative Learning, Students’ Academic achievement, Traditional Learning Methods.
Introduction
Technology is a branch of knowledge that deals with the creation and use of technical means and their interrelation with life, society, and the environment, drawing upon such subjects as industrial arts, engineering, applied science, and pure science. The application of this knowledge for practical ends involves a scientific or industrial process, invention, method, or the like the sum of the ways in which social groups provide themselves with the material objects of their civilization. Basic technology has been identified as an important science subject and its scientific and technological contribution to the development of any nation has been widely reported. It was as a result of the recognition given to this subject in the development of the individual and the nation that it was made a core subject among the subjects in the Junior Secondary School (JSS) related courses in Nigerian education system (Ara Tirmalar Dergisi, 2008).

Basic technology is still a compulsory subject that is considered difficult and boring by many students in the junior secondary school (Strathern, 2010). According to Woodard (2004), weaker students feel anxiety toward basic technology, and this anxiety affects their performance. Students who lack mastery in Basic technology subject are less successful in engineering and technology related courses, despite its introduction in secondary schools for a long period of time. Furthermore, low proficiency students performed below average on the national tests in Junior Secondary Examination (National Examination Council External Examiner Report 20010). Based on observations, the information shows that students are not actively involved in developing knowledge; they receive information passively and are less motivated. This passivity has caused much concern among educators because knowledge of Basic technology play a significant role in enhancing the country’s social economic development by implanting requisite technological knowledge in students right from childhood. The quality of science education that teachers provide to students is dependent upon what teachers do in their classroom (Zakaria & Iksan, 2007). The teaching method used in the class is one of the factors that make students become passive and have less interaction with each other in carrying out tasks.

Lazarowitz, Hert-Lazarowitz, and Baird (1994) have criticized the lecture method used by teachers because only hardworking students can benefits from it. Therefore, to enhance
the understanding of Basic technology, students must be more active in the classroom and must creatively acquire knowledge, especially in understanding and solving problems. Students should be given opportunities to develop, to interact, and to share with friends through collaborative learning activities. Thus the cognitive and affective development of students in this subject can be improved. An alternative method for the delivery of material is collaborative learning. Zakaria and Iksan (2007) agree that in collaborative learning students work face to face to complete a given task collectively.

In the recent years, collaborative learning method, which attracts the attention of many educators, represent an alternative to the traditional learning method. Collaborative learning is a process in which students learn by working in small groups and helping each other's learning for the achievement of a common goal. Since collaborative learning is a group working, it is similar to the set of working method. On the other hand, every group working is not collaborative learning unless it provides a certain rules. A group working becomes collaborative learning if every member of the group knows that each individual's success is dependent on every member's success and unless the other members are successful. According to Johnson and Johnson (1991), in order to construct a lesson with a collaborative method, five basic principles must be provided: (1) positive interdependence, (2) face-to-face primitive interaction, (3) individual accountability, (4) appropriate use of social skills, and (5) processing group functioning.

Collaborative learning encourages students to be active participants in the construction of their own knowledge (Webb, Troper, & Fall, 1995). Collaborative learning also encourages students to interact and to communicate with peers in harmony. In this way, collaborative learning promotes value such as honesty, cooperation, mutual respect, sense of responsibility, tolerance and willingness to sacrifice a consensus. Execution of duties in collaborative learning can develop self-confidence in students. Further, collaborative learning is an effective approach that Basic technology teachers need to incorporate into their teaching. Collaborative learning promotes deep learning of materials and helps students to achieve better grades (Shimazoe & Al-drich, 2010). According to Johnson and Johnson (1989), in collaborative learning, students tend to enjoy learning, and this motivates them to learn.
Melihan and Sirri (2001) conclude that the collaborative learning method is more effective than the traditional teaching method in the academic success of students.

Collaborative learning is an educational approach that involves groups of learners working together to solve a problem, complete a task, or create a product. It is based on the idea that learning is a naturally social act. Learning occurs through active engagement among peers, either face-to-face or online. The main characteristics of collaborative learning are; a common task or activity; small group learning, co-operative behavior; interdependence; and individual responsibility and accountability (Lejeune, 1999). In collaborative learning the task is divided vertically (i.e., members wore more or less concurrently or different aspects of a project), whereas in collaborative learning the task is divided horizontally (i.e., members work more or less sequentially on different aspects of a project) (Dillenbourg, 1999). Collaborative learning activities create opportunities for students to: engage in subject specific discussions with peers; Learn how to work collaboratively and support each other; develop effective teamwork and communication (including interpersonal and cross cultural awareness) skills; assimilate multiple views to deepen knowledge and promote critical thinking; fostering of class learning and mitigation of learner isolation in basic technology.

Basic technology teaching and learning are supposed to be result oriented and student-centered, and this can only be achieved when students are willing and the teachers are favorably disposed to assisting the students to learn together at their own pace, using the appropriate methods and resources in teaching the students (Edomwonyi, 2011). Students by nature are curious, they need to be actively involved in the learning processes while they are continuously equipping, testing, speculating and building their own personal construct and knowledge. It is only personalizing such knowledge that makes it valid and meaningful (Adesokan, 2002). To substantiate the argument, Usman [2006] remarked that the brain is not a passive consumer of information and to learn with understanding, a learner must actively construct meaning of what is to be learned through appropriate learning styles.
Statement of the Problem
Despite the prime position Basic technology occupies in the junior secondary school within the Nigerian educational system and the efforts made by researchers to enhance, students' achievement in this subject among others is still low. Some of the reasons identified for this failure are laboratory inadequacy, teachers' attitude, lack of tools, examination malpractice, time constraint for conduction of practical and lack of consumables, non-coverage of syllabus, class size, non-professionalism and environment.

Practical's in schools is aimed at giving the students the opportunity to gain meaningful learning, acquire appropriate skills and attitudes that enable them live and contribute to the development of their society. In view of the above factors, this study was to investigate the low achievement in Basic technology within some selected schools in Lagos using factors ranging from teacher variables (attitude, qualification, attendance at Basic technology workshop, condition of service), students variables (choice of career, attitude) and environmental – related variables (class-size, school location and laboratory adequacy).

Purpose of the Study
Specifically this study seeks to;
   i. Find out the difference in academic achievement of students who are exposed to collaborative learning and those not exposed to it.
   ii. Investigate the influence of collaborative learning on individual's students' academic achievement.
   iii. Examine the influence of collaborative learning on the arithmetical skills of students in Basic technology and
   iv. Evaluate the gender difference in the effectiveness of collaborative learning on students' performance in Basic technology.

Research Questions
   i. What are the differences in academic achievement of students who are exposed to collaborative learning and those not exposed to it?
   ii. What are the influences of collaborative learning on individual's students' academic achievement?
iii. Examine the influence of collaborative learning on the arithmetical skills of students in Basic technology?
iv. What is the gender effectiveness of collaborative learning on the arithmetical skills of students in Basic technology?

Research Hypotheses
The following hypotheses have been formulated to guide the study:

i. There is no significant difference in academic achievement of students who are exposed to collaborative learning and those not exposed to it.
ii. There is no significant difference in the effectiveness of collaborative learning on the students’ performance in Basic technology based on gender.

Methodology
The researcher carried out a survey research study on the impact of collaborative learning on the achievement of students in Basic technology: A study of selected schools in Lagos state. This study adopted the pre-test, post-test, control group quasi-experimental design using a factorial representation on the impact of collaborative learning on students in Basic technology. The variables of the study include independent variables: collaborative learning and traditional learning, which is based on the two moderator variables: age and gender, and one independent variable: students’ achievement in Basic technology. The design allows for the determination of effects of each of the independent variables on the dependent, main impact. The design also allows for the determination of the combined effects of each independent variable and the moderator variables (interaction effect) on the dependent variable.

The population of this study includes all the JS 2 Basic technology students in Lagos State. The sample size of 150 is a representative of all Basic technology students in Educational District IV of Lagos State (Lagos State is divided into six Educational Districts). The participants were 30 students drawn from each of the five selected secondary schools. The Sampling was guided by the following criteria: Availability of teachers for Basic technology subject, government owned schools, school must be evenly located in the state, mixed schools. Secondly, simple random sampling was
used to select five schools out of fifteen that meet the above criteria. Lastly, sample in each arm of the JSS II class selected for the study were used and that gave a total sample size of 150 students.

The instrument for data collection was the Basic Technology Achievement Test, (BTAT). The test is a 25 multiple-choice objective items designed to cover the topics of energy changes, transmission of electricity, simple machines, orthographic drawing, wood/metal work and machines. The researcher made use of Basic technology achievement test through quasi-experimental in line with the students after the treatment. Two groups where involved: the experimental group based on collaborative learning and the control group using traditional method of individualized strategy. The treatment would last for three weeks.

The Basic technology achievement test was scrutinized and validated by Basic technology teachers and Lecturers in Technology Education. The instrument was ensured for content and face validation in order to avoid error or mistake in data collection. Reliability of instrument is the degree of consistency with which a test may be applied, is the accuracy of data in relation to stability and precision. In determining the reliability of the instrument, the researcher estimated the test reliability of the instrument. The reliability co-efficient is found out to 0.89.

Permission was sought from the school principals for the research work. The schools teachers served as research assistant for the study, A control group classroom set up as group A. Same component would be made for group B. Group A was monitored under individualized learning (students are given the materials to study individually while the researcher monitors). Group B is supervised under collaborative learning strategy (students are given materials to study collectively). The research lasted for three weeks in the schools. The researcher spends 90 minutes (double periods), for two days in a week, for the research. After the whole learning processes, the test was administered and collected after 20 minutes. The pre-test/post-test method of data collection was used before and after intervention for few weeks using the same Basic technology achievement test. A discussion session was held with the students of the classes that participated in the exercise during which questions and answers exchanged. Intervention period for all learning groups for 3 weeks of 2 double periods (90 minutes). The hypothesis analyzed using T-Test statistical tool.
Data Analysis

Research Question One
What are the differences in the academic achievement of students who are exposed to collaborative learning and those not exposed to it.

Table 1: Academic performances of students exposed to collaborative learning.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Arithmetic Score Range(7)</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0-5</td>
<td>---------</td>
<td>0-20</td>
<td>Poor</td>
</tr>
<tr>
<td>2</td>
<td>6-9</td>
<td>3</td>
<td>24-36</td>
<td>Poor</td>
</tr>
<tr>
<td>3</td>
<td>10-12</td>
<td>7</td>
<td>40-48</td>
<td>Fair</td>
</tr>
<tr>
<td>4</td>
<td>13-14</td>
<td>9</td>
<td>52-56</td>
<td>Good</td>
</tr>
<tr>
<td>5</td>
<td>15-17</td>
<td>20</td>
<td>60-68</td>
<td>Very good</td>
</tr>
<tr>
<td>6</td>
<td>18-25</td>
<td>36</td>
<td>72-100</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

Table 2: Academic performance of students that are not exposed to collaborative learning.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Arithmetic Score Range(7)</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0-5</td>
<td>10</td>
<td>0-20</td>
<td>Poor</td>
</tr>
<tr>
<td>2</td>
<td>6-9</td>
<td>25</td>
<td>24-36</td>
<td>Poor</td>
</tr>
<tr>
<td>3</td>
<td>10-12</td>
<td>26</td>
<td>40-48</td>
<td>Fair</td>
</tr>
<tr>
<td>4</td>
<td>13-14</td>
<td>5</td>
<td>52-56</td>
<td>Good</td>
</tr>
<tr>
<td>5</td>
<td>15-17</td>
<td>3</td>
<td>60-68</td>
<td>Very good</td>
</tr>
<tr>
<td>6</td>
<td>18-25</td>
<td>6</td>
<td>72-100</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

Table 2 shows that none of the participants has a total score between 0 and 5 which is actually a very poor result. Only three out of 75 had a score range of 6-9 with poor results, seven out of 75 students score within the range 10-12 which is fair, while nine out of 75 had a score range of 13-14 with a good result, twenty students out of 75 had a score range of 15-17 which is good and thirty-six students out of 75 score within the range of 18-25 which is excellent. It could be noted that the 36 students which is 48% of the
total students had excellent results, while the 4% had poor results and 9.3% had fair results.

Table 2 further revealed that, ten participants out of 75 had a total score between 0 and 5 which is actually a very poor result. Twenty-five out of 75 had a score range of 6-9 with poor results, twenty-six out of 75 students score within the range 10-12 which is a fair result, while just five out of 75 had a score range of 13-14 with a good result, only three students had a very good result within the range score 15-17 and thirty-six students out of 75 score within the range of 18-25. It could be noted that the 25 students which is 33.33% of the total of all the students had poor results, while 26 students making a percentage of 34.67% a fair result and only six(8%) had an excellent result. The research question is translated to a hypothesis which should be tested to obtain the level of significance as stated in the hypothesis of chapter three. The instrument used to analysis this hypothesis is t-test.

**Hypothesis One**

\( H_1 \): There is no significant difference between the academic achievement of students who are exposed to collaborative learning and those not exposed to it

**Table 3**: T-Test on Academic Achievement of Students; Experimental and Control Groups

<table>
<thead>
<tr>
<th>Grouping Variable</th>
<th>N</th>
<th>Group Total Score</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ Performance</td>
<td>Experimental</td>
<td>75</td>
<td>1259</td>
<td>16.79</td>
<td>3.394</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>75</td>
<td>717</td>
<td>9.56</td>
<td>3.268</td>
</tr>
</tbody>
</table>

Table 3 shows the evaluation of the descriptive statistics. The mean scores of the two groups concerned the experimental group and the control group. It was noted from the table that the experimental group performed better with higher mean score of 16.79 in Basic technology Achievement Test than the control group with a lower mean score of 9.56. Furthermore, with a mean score of 16.79 from the experimental group of seventy-five (75) students, this indicates that the experimental group achieves a total performance score of 1259 while the control group achieved 717 from the performance
test. This implies that the experimental group performs 75.59% better than the control group.

Table 4  
T-Test for hypothesis One
Assumption=Equal variances and assumed

<table>
<thead>
<tr>
<th>T-Test for Equality of Means</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T</td>
<td>Df</td>
<td>Sig. (2-tailed)</td>
<td>Mean Difference</td>
<td>Std. Error Difference</td>
<td>95% Confidence Interval of the Difference</td>
<td></td>
</tr>
<tr>
<td>Students Performance</td>
<td>13.28</td>
<td>147.7</td>
<td>.000</td>
<td>7.227</td>
<td>.5444</td>
<td>6.15</td>
<td>8.30</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

The t-test statistics was calculated as 13.282, at 5 percent level of significance under 147.78 degrees of freedom, the returned p-value of 0.000 was found less than the level of significance (0.05); p < 0.05. Thus the null hypothesis is rejected. Hence there is a significant difference academic achievement of students who are exposed to collaborative learning and those not exposed to it.

Research Question Two
What are the influences of collaborative learning on individual students’ performance?

Table 5

<table>
<thead>
<tr>
<th>S/N</th>
<th>Position</th>
<th>Scores</th>
<th>Type of learning Adopted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>FIRST</td>
<td>23</td>
<td>COLLABORATIVE</td>
</tr>
<tr>
<td>2</td>
<td>FIRST</td>
<td>23</td>
<td>COLLABORATIVE</td>
</tr>
<tr>
<td>3-19</td>
<td>THIRD</td>
<td>22</td>
<td>COLLABORATIVE</td>
</tr>
<tr>
<td>20</td>
<td>TWENTIETH</td>
<td>21</td>
<td>COLLABORATIVE</td>
</tr>
</tbody>
</table>

The table 6 shows the position of each individual score and the method adopted for the work for the first twenty students. Careful observation of the table shows that the students with the first positions are just two with an overall score of 23 and the method they adopted was collaborative. Seventeen students score 22 whose position was third, 16 students out of the group were exposed to
collaborative learning while just one was not exposed to collaborative learning. The simply reveals that the individual performances of students exposed to collaborative learning is more quite impressing compare to those who are not exposed to collaborative learning.

**Research Question Three**
What are the influences of collaborative learning on the arithmetical skills of students in Basic technology?

Table 7: Academic performance of the arithmetical skills of students exposed to collaborative learning.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Arithmetic Score Range(7)</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0-2</td>
<td>5</td>
<td>0-28.6</td>
<td>Poor</td>
</tr>
<tr>
<td>2</td>
<td>3-4</td>
<td>32</td>
<td>42.8-57.2</td>
<td>Good</td>
</tr>
<tr>
<td>3</td>
<td>5-7</td>
<td>38</td>
<td>71.4-100</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

The table 7 shows the From the table above it is quite clear that only 5 out of 75 (6.67%) students had a score range of 0-2 which signifies a poor result, 32 students out of 75 (42.67%) had a score range of 3-4 showing a good result. 38 students (50.67%) scored within 5-7, having an excellent results.

Table 8 shows the academic performance of the arithmetical skills of students that are not exposed to collaborative learning.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Arithmetic Score Range(7)</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0-2</td>
<td>47</td>
<td>0-28.6</td>
<td>Poor</td>
</tr>
<tr>
<td>2</td>
<td>3-4</td>
<td>23</td>
<td>42.8-57.2</td>
<td>Good</td>
</tr>
<tr>
<td>3</td>
<td>5-7</td>
<td>5</td>
<td>71.4-100</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

Table 8 shows the academic performance of the arithmetical skills of students that are not exposed to collaborative learning.

It is observed that 47(62.6%) out of 75 score within the range of 0-2 having a poor result. 23(30.6%) out of 75 students score within 3-4
having a good result while only (6.67%) students had an excellent result.

**Research Question Four**

What is gender effectiveness of collaborative learning on the students' in Basic technology?

The table 9: The performance of female students exposed to collaborative learning.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Arithmetic Score Range(7)</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0-5</td>
<td>---------</td>
<td>0-20</td>
<td>Poor</td>
</tr>
<tr>
<td>2</td>
<td>6-8</td>
<td>2</td>
<td>24-36</td>
<td>Poor</td>
</tr>
<tr>
<td>3</td>
<td>9-11</td>
<td>5</td>
<td>40-48</td>
<td>Fair</td>
</tr>
<tr>
<td>4</td>
<td>12-14</td>
<td>6</td>
<td>52-56</td>
<td>Good</td>
</tr>
<tr>
<td>5</td>
<td>15-17</td>
<td>9</td>
<td>60-68</td>
<td>Very good</td>
</tr>
<tr>
<td>6</td>
<td>18-25</td>
<td>15</td>
<td>72-100</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

It can be observed table 9 that none of the female students scored within a range of 0-5, just two scored within 12-14 and 9(24%) out of 37 students scored within 15-17 which is very good. 15(40.5%) students had excellent results.

Table 10: Academic Performance of Male Students Exposed to Collaborative Learning

<table>
<thead>
<tr>
<th>S/N</th>
<th>Arithmetic Score Range(7)</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0-5</td>
<td>---------</td>
<td>0-20</td>
<td>Poor</td>
</tr>
<tr>
<td>2</td>
<td>6-8</td>
<td>1</td>
<td>24-36</td>
<td>Poor</td>
</tr>
<tr>
<td>3</td>
<td>9-11</td>
<td>7</td>
<td>40-48</td>
<td>Fair</td>
</tr>
<tr>
<td>4</td>
<td>12-14</td>
<td>6</td>
<td>52-56</td>
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</tr>
<tr>
<td>5</td>
<td>15-17</td>
<td>11</td>
<td>60-68</td>
<td>Very good</td>
</tr>
<tr>
<td>6</td>
<td>18-25</td>
<td>13</td>
<td>72-100</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

It can also be observed in table 10 that none of the male students scored within 0-5, on person scored within the range 6-9 with poor grade, while seven students scored within the range of 10-12 with
fair results, while 13-14 range score was acquired by six students, 11 scored within the range of 15-17 and 13 scored within the range of 18-25 which is excellent.

The analysis of hypothesis four is done using the t-test. The critical analysis is illustrated below:

**Hypothesis Two**

\( H_0: \) There is no significance difference in the effectiveness of collaborative learning on the students’ performance in Basic technology based on gender.

\( H_1: \) There is a significance difference in the effectiveness of collaborative learning on the students’ performance in Basic technology based on gender.

The hypothesis stated above was tested to find empirical relationships between selected and measured variables. These hypotheses were tested using chi-square at 0.05 levels of significance.

**Table 11: T-Test on Academic Achievement of Students; Experimental and Control Groups**

<table>
<thead>
<tr>
<th>Collaborative Grouping Variable</th>
<th>N</th>
<th>Mean</th>
<th>Group Total Score</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative Learning Performance Male</td>
<td>37</td>
<td>16.57</td>
<td>613</td>
<td>3.387</td>
<td>.557</td>
</tr>
<tr>
<td>Female</td>
<td>38</td>
<td>17.00</td>
<td>646</td>
<td>3.433</td>
<td>.557</td>
</tr>
</tbody>
</table>

Table 11 shows the evaluation of the descriptive statistics i.e the mean scores of the two groups concerned, the male students and the female students. It was noted from the table that just a slight difference (0.43) existed between the performance of the two groups, as the male students had a mean score of 16.57 in the Basic technology Achievement Test, while the female students had slightly higher mean score of 17.00. Furthermore, as the male students were thirty-seven (37), while the female students were thirty-eight (38),
the observed difference of 0.43 in their mean score and 5.38% difference in their total performance score could be as a result of the slight difference in their number, which could not be avoided. This implies that the performances of the two groups are really indifferent. The significance of the groups’ performance is tested and presented in table 12 below.

Table 12                  T-Test for hypothesis Two  
Assumptions= Equal variances not assumed  

test for Equality of Means  
T    Df   Sig. (2-tailed)  Mean Difference Std. Error Difference 95% Confidence Interval of the Difference

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Students Performance</td>
<td>-</td>
<td>72.986</td>
<td>.585</td>
<td>.432</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The t-test statistics on table 12 was calculated as -0.549 at 5 percent level of significance under 72.986 degrees of freedom, the returned p-value of 0.585 was found greater than the level of significance (0.05); p > 0.05. Thus the null hypothesis is not rejected. Hence, there is no significant difference in the effectiveness of collaborative learning on the students’ performance in Basic technology based on gender. This implies that the gender of the students does not affect their academic performance in collaborative learning.

Discussion of Findings
From the answer to the research question, it was found that there is a positive influence of collaborative learning on arithmetical skills of students in Basic technology. This implies that the collaborative learning method can be adopted by Basic technology teachers in secondary schools to enhance the academic performance of the students in Basic technology. This is in agreement with Vygotsky's (1998) claim on collaborative learning that human mental functions and accomplishments have their origins in social relationships, and that knowledge is socially constructed through collaborative efforts to learn and solve problems.

From the test of the hypothesis one, it was found that there is a significant difference academic achievement of students who are
exposed to collaborative learning and those not exposed to it. The implication of this is that if the teacher can take their time to expose students to collaborative learning method, the academic performance of the students in Basic technology would be better. This is indifferent from the opinion of Johnson and Johnson (2000), that relative to students taught traditionally i.e., with instructor-centered lecturers, individual assignments, and competitive grading collaborative students tend to exhibit higher academic achievement, greater persistence through graduation, better high-level reasoning and critical thinking skills, deeper understanding of learned materials, greater time to task and less disruptive behavior, lower levels of anxiety and stress, greater intrinsic motivation to learn and achieve, greater ability to view situations from others’ perspectives, more positive and supportive relationships with peers, more positive attitudes towards subject areas, and higher self-esteem (Johnson and Johnson, 2006).

From the test of the hypothesis two, it was found that the academic performance of the students in collaborative learning is not affected by their gender. That is, both male and the female students performed better with the adoption of collaborative learning method. This is similar to the views of Dyson and Grineski (2001) that individuals diverse in backgrounds, goals, skill sets, and interests will be required to collaborate with each other activities directed towards group outcomes. Classroom content taught through collaborative instructional strategies, with heterogeneous teams in an inclusive environment encourages positive student interactions in pursuit of team goals.

Conclusion
In this study an attempt has been made to look into the impact of collaborative learning on the academic performance of students in Basic technology. Collaborative learning activities create opportunities for students to: engage in subject specific discussions with peers; Learn how to work collaboratively and support each other; develop effective teamwork and communication (including interpersonal and cross cultural awareness) skills; Assimilate multiple views to deepen knowledge and promote critical thinking; Foster individual accountability to the team; Develop independent learning strategies; Structure out-of-class learning and mitigate learner isolation. Basic technology teaching and learning are
supposed to be result oriented and students centered, and this can only be achieved when students are willing and the teachers are favorably disposed, using the appropriate methods and resources in teaching the students (Edomwonyi-Out, 2011). Students by nature are curious; they need to be actively involved in the learning process in which they are continuously equipping, testing, speculating and building their own personal construct and knowledge. It is only by personalizing such knowledge that it becomes valid, meaningful and useful to them. In Basic technology students need to actively construct their own personal awareness and meaning (Adesokan, 2002). To substantiate the argument, Usman [2006] remarked that the brain is not a passive consumer of information and to learn with understanding, a learner must actively construct meaning of what to be learned through appropriate learning style. In view of the above factors suspected to be some of the reasons why students' performance in Basic technology continue to decline, this study was to investigate low achievement in Basic technology within some selected schools in Lagos ranging from teacher variables (attitude, qualification, attendance at Basic technology workshop, condition of service), students variables (choice of career, attitude) and environmental-related variables (class-size, school location and laboratory).

**Recommendations**

In line with the findings made from this investigation, the following recommendations were offered by the researchers.

1. The need to expose students to collaborative method of teaching and learning.
2. School administrators should assist students to improve on their learning styles.
3. Celebration of diversity. Students learn to work with all types of people. During small-group interactions, they find many opportunities to reflect upon and reply to the diverse responses fellow learners bring to the questions raised. Small groups also allow students to add their perceptive to an issue based on their cultural differences. This exchange inevitably helps students to better understand other cultures and points of view.
4. Acknowledgment of individual’s differences. When questions are raised, different students will have a variety of responses.

5. Interpersonal development. Students should be encouraged to learn how to relate with their peers and other learners as they work together in group enterprises.

6. More opportunities for personal feedback can be obtained through collaborative learning strategy.

References


Johnson and Johnson (1991),


Melihan, U., & Sirri, A. (2011). The effect of cooperative learning method on the students' success and recall levels of the 8th


ABILITY TO EFFECTIVELY USE THE LANGUAGE OF INSTRUCTION DIFFERENT FROM ONE’S MOTHER TONGUE IS A FUNCTION OF ADEQUATE DEVELOPMENT OF EFFECTIVE USE OF MOTHER TONGUE. HOWEVER, CHILDREN WITH HEARING IMPAIRMENT LACK THE ABILITY AND OPPORTUNITY TO DEVELOP AND EFFECTIVELY USE MOTHER TONGUE, WHICH ADVERSELY AFFECTS THE DEVELOPMENT AND USE OF A SECONDARY LANGUAGE. THIS STUDY, THEREFORE, INVESTIGATED THE EFFECTIVENESS OF PLAY-BASED INTERVENTION AND DIRECT INSTRUCTION STRATEGY ON VOCABULARY DEVELOPMENT IN ENGLISH LANGUAGE IN LAGOS STATE, NIGERIA. THE RESEARCH DESIGN WAS A QUASI-EXPERIMENTAL PRE-TEST, POST-TEST CONTROL GROUPS. ALL CHILDREN WITH HEARING IMPAIRMENT IN INCLUSIVE EDUCATION IN LAGOS STATE CONSTITUTED THE POPULATION OF THE STUDY WHILE THE SAMPLE SIZE WAS 28 PUPILS COMPRISING 14 MALE AND 14 FEMALE PUPILS WITH HEARING IMPAIRMENT. SIMPLE RANDOM SAMPLING AND PURPOSIVE SAMPLING METHODS WERE USED TO SELECT SCHOOLS AND PARTICIPANTS’ RESPECTIVELY. TWO RESEARCH HYPOTHESES WERE TESTED IN THIS STUDY. VOCABULARY SEQUENCE TEST (VOSET) WITH 0.70 RELIABILITY INDEX WAS USED TO GATHER RELEVANT DATA. MEAN, STANDARD DEVIATION, MEAN DIFFERENCE, ANALYSIS OF COVARIANCE (ANCOVA), AND LEAST SIGNIFICANT DIFFERENCE (LSD) WERE THE STATISTICAL TOOL FOR DATA ANALYSIS. THE STUDY REVEALED THAT THE TWO INSTRUCTIONAL STRATEGIES WERE EFFICACIOUS IN TEACHING VOCABULARY TO PUPILS WITH HEARING IMPAIRMENT. HOWEVER,
Play-Based was more effective. Besides, the teaching methods do not have significant gender effect on pupils with hearing impairment. Play-Based Intervention and Direct Instruction should therefore, be employed to teach language to children with hearing impairment at basic levels.

Keywords: Play-Based, Direct Instruction, Pupils with hearing impairment, Mastery ability, English Language vocabularies

Introduction
A language is a tool for socialization and one of the fundamental attributes of man in a defined environment. Language is cultural, and its acquisition is most of the time informal and or subconscious. Developing meaningful language depends largely on a disease free auditory system as well as a well-developed brain. This is because receiving, processing and interpretation of auditory information anchor on well-developed and functioning auditory and central nervous systems.

However, for people with hearing impairment, their inability to perceive auditory stimuli either total or partial impedes their ability to develop speech and language in the same way like their non-hearing impaired counterparts. This, of course, affects some other areas of their lives. American Speech-Language-Hearing Association (2005) presented that hearing loss leads to delay in receptive and expressive communication skills, which in turn result in low academic achievement, isolation, and low self-concept. With a delay in receptive skill, vocabularies acquisition become very slow or impossible; learning becomes extremely difficult, especially the ability to speak with accuracy (semantic) (American Speech-Language-Hearing Association, 2005).

Studies on children with hearing impairment and their mothers revealed that language acquisition and development depends on frequent, consistent, and accessible communication and early interactions which establish the foundation upon which language develops (Marschark, 2001). When a child lacks these due to auditory challenges, the problem of language development manifests in all its forms. Ability to develop and speak ones’ mother language (L1) forms the basis for developing a secondary language (L2). Hence, weakness or inability to use the language of one's
environment correctly, adequately and effectively has its impact on other language(s) to be learned by such individual either for formal learning or active interaction in one’s environment.

Researches on the effects of mother tongue (L1) on the second language (L2) indicated that there is a greater influence of L1 on the development of L2 (Derahashan & Karimi, 2015; Karim & Nasaji, 2013; Fatemi, Sobhani & Abolhasan, 2012). It was found that the only way learners can communicate well with semantically correct sentences is the good mastery of and word for word translation of L1 into L2 as L1 forms the foundation upon which the L2 is built on (Derahashan & Karimi, 2015; Bhela, 1999). This is because when learners of second language want to write or speak in the target language, they use the structure of the first language as foundation, thereby making them to be effective and have good mastery. This, therefore, means the inability to properly develop the first language effectively leads to difficulty in developing and having a good mastery of the second language. However, as researches have reported positive implications of mother tongue on the development of the second language, unfortunately, circumstances may interplay on children with hearing impairment total access to the natural language of its environment during the developmental stage which may deprive them the opportunity to acquire the language of their environment. Cannon & Kirby (2013) citing Mitchell & Karchmer (2004) reported that more than 95% children that are born deaf by hearing parents who do not know sign language which would have provided a better alternative for the development of the language of their immediate environment. This is the scenario for many children with hearing impairment in Sub-Saharan Africa in which Nigeria constitutes the highest proportion in population.

The inability of children with hearing impairment to develop the language of their immediate environment due to inability to acquire meaningful speech as a result of auditory deprivation in degrees and time has added another dimension to the development of fine English structure which is regarded as a medium of instruction in a formal classroom setting. Spencer and Marschark (2010) in their study found that complete access to natural language influences the development of similar language regardless of modality. Unfortunately, this is what many children born with deafness lack, and this may constitute an impediment to the
development of another language that could serve as a medium of instruction in a formal setting.

Learning English to non-native speaker, whether among students with hearing impairment, is an extremely difficult task for some reasons. For instance, English Language is different from Sign Language (American Sign Language) mostly adopted by many countries and most importantly, English is a foreign language with a strikingly different syntax structure (Sandler & Lillo-Martin, 2006). Also, the alphabet used to write the English corresponds to sound to which children born with hearing impairment may be deprived of because of auditory impediment (Cannon & Kirby, 2013), and many dialects in Nigeria may run afoul of linguistic formula to which the native speaker of English uses. This may have been the reason why writing correct sentences among students with hearing impairment proves laborious.

It is on this note that this study becomes expedient to find ways of helping students with hearing impairment out of their present predicament. Though many strategies have been employed to improve semantics structures of children with hearing impairment by special educators and other stakeholders in the education of children with hearing impairment, these have yielded little results. This study therefore explores the effectiveness of play-based intervention and direct instruction strategy on mastery ability of children with hearing impairment in English Language.

Play-Based learning was discovered during the seventeenth century in Europe because of the realisation that the early years are crucial to a child's development and play is an essential instrument that can aid development. The early proponent of play-based learning process was Fredrick Froebel who believed in learning through play, and this idea motivated the establishment of kindergarten. The concept of Play-Based learning is the way it sounds, play to learn. The intervention is based on the principle of allowing children to learn while playing. The concept gained more popularity since the early 2000s and have been infused into the curriculum of countries like Canada, Sweden, China, United Arab Emirate, and New Zealand (Daniels & Pyle, 2018). Play-Based learning is learning while playing, though providing an exact definition has generated a lot of debates in research as to what activities are to be seen as a play. This is because learning is not to be perceived as play but remains fundamental to the definition and
understanding of Play-Based learning (Payle, DeLuca & Daniels, 2017). Studies and proponents of Play-Based learning have identified types of play-based learning to be of two-dimension; activities of learning controlled by children and the one that is teacher-guided. Free play which is child-directed, voluntary, self-motivated and pleasurable has been described as rewarding but may be unnecessarily hijacked. On the other hand, the teacher-directed play-based learning refers to play activities with some level of adult involvement to extend additional learning opportunities with the play itself (Weishberg, Hirsh Pasek & Golinkoff, 2013). For adequate learning, the two styles must not be in isolation of the other. The blending of child-directed and teacher motivated Play-Based learning should be the focus of the users to get a robust and fruitful outcome.

Studies on the efficacies of the Play-Based instructional strategy have reported positive outcome among those who have used it for instructional delivery. For instance, a study focusing on Play-Based learning method to enhance the mastery ability of vocabulary among preschool children in Malaysia revealed that Play-Based strategy significantly enhanced the mastery of vocabulary and interest in learning the Malay language among pupils (Nasir, Yousof & Arumugam, 2103). This result is line with Hall & O'Donnell (2011) who presented that young children learn best through play, game, game stories, art, and puppetry which can aid social interaction. Also, Sharp, Escante & Anderson (2012) investigated literacy instruction in kindergarten using the power of dramatic play found positive outcome in children within the experimental group than the control group. Similarly, children engaging in Play-Based literacy curriculum centre around mutually-directed play where educators incorporate target vocabulary words into play context were observed to utilize these newly taught words frequently than the control group (Van Oers & Duijkers, 2013).

The significant influence of gender on Play-Based instruction has not been widely explored as there are few evidences that present the issue of gender and Play-Based intervention. Nevertheless, one cannot conclude that this variable is not as important as to influence the effectiveness of this intervention on male and female individuals.
The use of Play-Based strategy is based on Vygostski developmental theory, the proponent of social constructivist theory who believed that children learn better through play and social interaction (Vygostki, 1967). The efficacy of play-based learning cannot be over emphasised as it is experiential for children and it is highly beneficial for children without hearing impairment, the adaptation for instructional delivery will be useful for children who cannot develop language because of their auditory deprivation.

On the other hand, Direct Instruction Method is a strategy typically focusing on accomplishing instructional targets by providing training on skills that are closely related to the targets. In Directs Instruction, lessons are well planned, neat and organized around small learning increments and clearly defined with prescribed teaching task (National Institute, 2007). The most gain of this pedagogy is that it provides a means of efficiently communicating a large amount of information within a short period to students (Cohen, 2008). Direct Instruction Strategy was developed by Engelmann, Bereiter and Becker in late 1960s at the University of Illinois, and was first implemented as direct instruction system for teaching and remediation consisting of programmes addressing Reading, Language and Mathematics (Magliaro, Lockee & Burton, 2005). The goal of Direct Instruction is for children to be directed through their development with teachers leading activities directed towards specific learning. Other characteristics of Direct Instruction are fast paced learning activities, active participation, involvement of teachers and children and positive reinforcement offered and instant correction of mistake.

Studies have revealed that Direct Instruction has been effective on several numbers of skills needed by students. Oladayo & Oladayo (2012) employed Direct and Indirect Instruction strategies on students’ achievement in Mathematics in Nigeria; the result of the study revealed that the experimental group subjected to Direct Instruction out-performed their counterparts in Indirect and control groups. Also, Al-Makahleh (2011) examined the effectiveness of Direct Instruction strategy on Mathematics achievement of Primary 4th and 5th-grade students with learning difficulties reported a significant effect of Direct Instruction strategy on basic skills achieved among 4th and 5th-grade students with learning difficulties. Similarly, Adam & Engelmann (1996) reviewed 34 separate studies
out of which 87% of the results favoured the use of Direct Instruction as a means of aiding the achievement of students. Several similar case studies have also reported efficacies of Direct Instruction on their subjects (Wilson, 2003; Graves, 2002; Goral, 2002; Miller, 2001). Contrarily, Lopez, Torrance, Rijlaarsdama, & Fidalgo (2017) in their study on the effects of Direct Instruction and strategy modelling on upper-primary students’ writing development reported no significant difference in the two experimental groups. The outcome of their study cannot be regarded as enough ground to discard this teaching strategy.

Direct Instruction strategy is based on the assumption that disadvantaged children meet up with their peers if instructors are effective and efficient. In this wise, the unique needs of low achievers who struggle for achievement can adequately be met in diverse areas of needs. This is because this strategy is used to accelerate students’ progress with the aim to achieve mastery and reflective accuracy. To achieve these, there are steps involved. However, these steps are to be followed strictly with a lot of caution. They include: measuring students’ performance directly and accurately while concentrating on basic concepts much needed by the students, goals are set accurately, operationally formulated so as to introduce the final behaviour expected from students, instructional tasks are analysed and elements are sequentially and systematically arranged, sufficient time is allocated for task learning, feedbacks are provided for students, students are instructed to practice the task mastered more, students’ performance is displayed in suitable graphical form and students must be provided with appropriate problem solving form with supports and practices that match specific skills (Al-Makahleh, 2011).

Gender implication of Direct Instruction strategy was explored by Oladayo & Oladayo (2012) whose study investigated the effect of direct and indirect instructional strategies on students’ achievement in Mathematics. The results, among others, revealed that gender significantly determined the effect of direct instructional strategy with male students responding more positively to Direct Instruction than their female counterparts.

With the numerous contributions of these two strategies explored and their differential effectiveness at different places and time, it will be expedient to engage these two strategies in the teaching and development of adequate vocabularies among children
with hearing impairment who because of their disability have not been able to adequately achieve correct sequence in their construction of English vocabularies. Therefore, this study is on the effectiveness of Play-Based Intervention and Direct Instruction strategy on mastery ability of pupils with hearing impairment in Lagos State, Nigeria.

**Hypotheses**

1. Hypothesis 1: Achievement in English Language mastery ability will not significantly differ among participants in the Play-Based Intervention, Direct Instruction and Control Group.
2. Hypothesis 2: There is no significant interaction effect of the experimental conditions and gender on the achievement in English Language mastery ability.

**Methodology Research Design**

The research design adopted for this study is a quasi-experimental pre-test/post-test control group research design.

**Population of the Study**

The population of the study consisted of all pupils in inclusive schools in Lagos State.

**Sample and Sampling Technique**

A sample size of 28 elementary school pupils consisting of 13 male and 15 female pupils with hearing impairment was used for the study. The sample was selected through simple random and purposive sampling techniques. Simple random sampling of hat and draw method was used to select three inclusive primary schools out of 31 inclusive schools in Lagos State. The next stage of the sampling technique involved using a purposive sampling method to select one intact class of primary two pupils in the sampled schools.

Simple random sampling technique was used to randomly assign the schools to the experimental groups. There were three experimental groups namely: Play-Based Intervention, Direct Instruction Method and control groups. School A was randomly assigned to Play-Based Intervention, while Schools B and C were assigned to Direct Instruction teaching strategy and Control Group, respectively.
Instrument
The instrument used in this study was the Vocabulary Sequence Test (VOSET) adapted from British Council Vocabulary Skill Test for basic vocabulary. Basic Vocabulary Skill Test consists of skills, Grammar, Vocabulary and another aspect. The aspects adapted were the Grammar and Vocabulary sections. The contents were structured to meet the standard of the participants and their condition.

A pilot test was carried out in another state to determine the reliability of the instrument. The reliability coefficient yielded 0.70 using Cronbach alpha. Each section of VOSET consisted of ten items within the grasp of pupils in basic 2 in different schools used for both experimental and control groups.

Administration of Instrument/Data Collection
The experiment duration was 10 weeks. The experiment was conducted in three phases, namely: pretesting phase, treatment phase and post testing phase.

The testing phase involved introduction, familiarization and administration of the VOSET. The selected schools for the study were visited at this stage and the researchers introduced themselves to the schools’ administrators, non-teaching and teaching members of staff. The researchers also met with the pupils during the familiarization process to have a close affinity with the pupils. After that, a baseline assessment was conducted by the researchers with the use of VOSET. The VOSET was administered to a total sample size of 28 pupils in the three schools. Schools A, B and C had 10, 9 and 9 pupils who were involved in the baseline assessment. The aim of the pretesting was to ensure the level of vocabulary mastery ability among the samples. Schools were randomly assigned to Play-Based Intervention, Direct Instructional strategy and conventional method respectively (A, B, C). A total of 28 pupils participated in the study. In experimental group A, the participants were five males and five females, experiment group B had five males and four females while the control group consisted of four male and five female participants making a total of 28 participants.

The treatment phase involved the teaching of the three experimental groups based on the different teaching methods. School A was taught using the Play-Based Intervention, School B was taught using the Direct Instruction method while School C, which
was the Control Group was exposed to the conventional method of teaching.

The post testing phase was the last phase in the experimental process that involved the readministration of the VOSET to the respective groups.

**Method of Data Analysis**
The data gathered were analysed using descriptive and inferential statistics. The descriptive statistics used involved mean, standard deviation and mean differences while the inferential statistics used were Analysis of Covariance (ANCOVA) and LSD multiple comparison tests. The hypotheses were tested at 0.05 level of significance.

**Results**
Hypothesis 1: Achievement in English Language mastery ability will not significantly differ among participants in the Play-Based Intervention, Direct Instruction, and Control Group.

**Table 1: Descriptive Statistics for Experimental Conditions in English Language Mastery Ability**

<table>
<thead>
<tr>
<th>Experimental Groups</th>
<th>Pre-test N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Post-test Mean</th>
<th>Std. Dev.</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play-Based Intervention</td>
<td>10</td>
<td>2.40</td>
<td>0.52</td>
<td>9.50</td>
<td>0.53</td>
<td>7.10</td>
</tr>
<tr>
<td>Direct instruction</td>
<td>9</td>
<td>2.44</td>
<td>0.73</td>
<td>7.44</td>
<td>1.67</td>
<td>5.00</td>
</tr>
<tr>
<td>Control Group</td>
<td>9</td>
<td>2.44</td>
<td>0.53</td>
<td>4.56</td>
<td>0.73</td>
<td>2.11</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>2.43</td>
<td>0.57</td>
<td>7.25</td>
<td>2.32</td>
<td>4.82</td>
</tr>
</tbody>
</table>

Figures from Table 1 show that at Pre-test, Play-Based Intervention group had a mean average of 2.40, Direct Instruction group with 2.44 and Control Group with 2.44. At post-test, the Play-Based Intervention, Direct Instruction and Control Group had mean average of 9.50, 7.44 and 4.56 respectively. Both Play-Based Intervention and Direct Instruction groups had mean difference of 7.1 and 5, and were above the total mean of 4.82. As a result, an Analysis of Covariance was computed to determine the significance of the experimental groups and the result are presented in Table 2.
Table 2
ANCOVA for English Language Experimental Conditions

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>116.419</td>
<td>3</td>
<td>38.806</td>
<td>32.303</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>67.543</td>
<td>1</td>
<td>67.543</td>
<td>56.225</td>
<td>.000</td>
</tr>
<tr>
<td>Covariate</td>
<td>.113</td>
<td>1</td>
<td>.113</td>
<td>.094</td>
<td>.762</td>
</tr>
<tr>
<td>Group</td>
<td>116.419</td>
<td>2</td>
<td>58.209</td>
<td>48.455</td>
<td>.000</td>
</tr>
<tr>
<td>Error</td>
<td>28.831</td>
<td>24</td>
<td>1.201</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1617.000</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>145.250</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F-critical (2,24) = 3.4

Observation from Table 2 shows that an F-calculated value of 48.455 resulted as the difference between the experimental conditions. The calculated value was found to be greater than the critical value of 3.4, given degrees of freedom of 2 and 24, at 0.05 level of significance. Thus, the null hypothesis was rejected and it was concluded that achievement in English Language mastery ability was significantly different among participants in Play-Based Intervention, Direct Instruction strategy and Control Group. Further analysis was conducted to determine the pair that was significant. The result of the pairwise comparison was presented in Table 3.

Table 3
Pairwise Comparison on Achievement in English Language Experimental Conditions

<table>
<thead>
<tr>
<th>(1) Experimental Groups</th>
<th>(I)</th>
<th>Experimental Groups</th>
<th>Mean Difference (I - J)</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play-Based Intervention</td>
<td></td>
<td>Direct Instruction</td>
<td>2.061*</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control Group</td>
<td>4.949*</td>
<td>.000</td>
</tr>
<tr>
<td>Direct Instruction</td>
<td></td>
<td>Play-Based Intervention</td>
<td>-2.061*</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Control Group</td>
<td>2.889*</td>
<td>.000</td>
</tr>
</tbody>
</table>
Evidence from Table 3 shows that there is significant difference in the mean achievement between Play-Based Intervention and Control Group (t-test = 4.949; p < 0.05); Direct Instruction and Control Group (t-test = 2.889; p < 0.05); and Play-Based Intervention and Direct Instruction groups with (t-test; p < 0.05).

**Hypothesis 2:** There is no significant interaction effect of the experimental conditions and gender on the achievement in English Language.

**Table 4**

<table>
<thead>
<tr>
<th>Experimental Groups</th>
<th>Gender</th>
<th>N</th>
<th>Pre-test Mean</th>
<th>Std. Dev.</th>
<th>Post-test Mean</th>
<th>Std. Dev.</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play-Based Intervention</td>
<td>Male</td>
<td>5</td>
<td>2.40</td>
<td>0.55</td>
<td>9.40</td>
<td>0.55</td>
<td>7.00</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>5</td>
<td>2.40</td>
<td>0.55</td>
<td>9.60</td>
<td>0.55</td>
<td>7.20</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>10</td>
<td>2.40</td>
<td>0.52</td>
<td>9.50</td>
<td>0.53</td>
<td>7.10</td>
</tr>
<tr>
<td>Direct Instruction</td>
<td>Male</td>
<td>5</td>
<td>2.60</td>
<td>0.89</td>
<td>7.60</td>
<td>1.34</td>
<td>5.00</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4</td>
<td>2.25</td>
<td>0.50</td>
<td>7.25</td>
<td>2.22</td>
<td>5.00</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>9</td>
<td>2.44</td>
<td>0.73</td>
<td>7.44</td>
<td>1.67</td>
<td>5.00</td>
</tr>
<tr>
<td>Control Group</td>
<td>Male</td>
<td>4</td>
<td>2.50</td>
<td>0.58</td>
<td>4.50</td>
<td>0.58</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>5</td>
<td>2.40</td>
<td>0.55</td>
<td>4.60</td>
<td>0.89</td>
<td>2.20</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>9</td>
<td>2.44</td>
<td>0.53</td>
<td>4.56</td>
<td>0.73</td>
<td>2.11</td>
</tr>
<tr>
<td>Total</td>
<td>Male</td>
<td>14</td>
<td>2.50</td>
<td>0.65</td>
<td>7.36</td>
<td>2.21</td>
<td>4.86</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>14</td>
<td>2.36</td>
<td>0.50</td>
<td>7.14</td>
<td>2.51</td>
<td>4.79</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>28</td>
<td>2.43</td>
<td>0.57</td>
<td>7.25</td>
<td>2.32</td>
<td>4.82</td>
</tr>
</tbody>
</table>
Descriptive Data on Gender and Experimental Conditions in Achievement in English Language

Results of the descriptive analysis carried out in Table 4 shows that male participants’ mean achievements in the English Language at pre-test were 2.4, 2.6 and 2.5 for Play-Based Intervention, Traditional Strategy, and Control Groups respectively. Their female counterparts had 2.4, 2.25 and 2.4 for Play-Based Intervention, Direct Instruction strategy, and Control Groups respectively at pre-test.

At post-test, male mean achievement in English Language for Play-Based Intervention, Direct Instruction strategy and Control Groups were 9.4, 7.6 and 4.5 respectively. Also, their female counterparts had a mean achievement in English Language mastery ability of 9.6, 7.25 and 4.6 for Play-Based Intervention, Direct Instruction strategy and Control Groups respectively.

An appraisal of the results shows that Play-Based Intervention group had the highest mean difference of 7 and 7.2 for male and female participants respectively. This was followed by Direct Instruction strategy with male and female participants having 5. To determine the statistical significance of the mean achievement in the English Language mastery ability, an analysis of covariance was computed and the result presented in Table 5.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>116.766</td>
<td>6</td>
<td>19.461</td>
<td>14.348</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>66.641</td>
<td>1</td>
<td>66.641</td>
<td>49.131</td>
<td>.000</td>
</tr>
<tr>
<td>Covariate</td>
<td>.066</td>
<td>1</td>
<td>.066</td>
<td>.049</td>
<td>.828</td>
</tr>
<tr>
<td>Group</td>
<td>115.743</td>
<td>2</td>
<td>57.872</td>
<td>42.666</td>
<td>.000</td>
</tr>
<tr>
<td>Gender</td>
<td>8.371E-05</td>
<td>1</td>
<td>8.371E-05</td>
<td>.000</td>
<td>.994</td>
</tr>
<tr>
<td>Group * Gender</td>
<td>.347</td>
<td>2</td>
<td>.173</td>
<td>.128</td>
<td>.881</td>
</tr>
<tr>
<td>Error</td>
<td>28.484</td>
<td>21</td>
<td>1.356</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1617.000</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>145.250</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fcritical (2, 21) = 3.47
F-calculated value of 0.128 was derived as the interaction effect of gender and experimental conditions on English Language mastery ability. The value was found to be less than the critical value of 3.47, given degrees of freedom 2 and 21, at 0.05 level of significance. Consequently, the null hypothesis was not rejected. It was concluded that there is no significant interaction effect of gender and experimental conditions on the achievement in the English Language mastery ability of pupils with hearing impairment.

**Discussion**

The results of this study revealed that both Play-Based Intervention and Direct Instruction strategy were both effective in teaching vocabulary mastery to pupils with hearing impairment at the basic level. The impacts of these teaching strategies lend credence to previous studies on effectiveness of each of the strategies at different locations and on different participants. The outcome of this study corroborated Nasir, Yousof & Arumugam (2013) who investigated the effect of Play-Based learning method on vocabulary mastery ability among preschool children in Malaysia. The result of the study revealed that play-based strategy significantly enhanced the mastery of vocabulary and interest in learning the Malay language among pupils. Also, the result is in line with Sharp, Escante & Anderson (2012) that investigated literacy instruction in kindergarten learners using the power of dramatic play; the study revealed positive outcome among children within the experimental group than the control group. The effectiveness of the Play-Based strategy on improving vocabulary and mastery ability pupils with hearing impairment is a further testimony that can be used to improve learning outcome of children at the basic level.

Furthermore, several studies have also reported efficacies of the Direct Instruction on their subjects (Wilson, 2003; Graves, 2002; Goral, 2002; Miller, 2001). For instance, Oladayo & Oladayo (2012) employed Direct and Indirect Instruction strategies on students’ achievement in Mathematics in Nigeria. The result of the study revealed that an experimental group which was subjected to Direct Instruction out-performed their counterparts in Indirect and Control Groups. Also, Al-Makahleh (2011) examined the effectiveness of Direct Instruction strategy on Mathematics achievement of Primary 4th and 5th grade students with learning difficulties, reported a significant effect of Direct Instruction strategy
on basic skills achievement among 4th and 5th grade students with learning difficulties. Hence, the two instructional strategies worth their use in learning process among elementary pupils.

In addition, the result further revealed that there was no interaction effect of gender and experimental conditions on English Language mastery ability among the participants. The non-effect of experimental conditions is a reflection of the fact that the condition of disability has the same impact on both male and female participants; hence, this may be attributed as reason the treatment has similar effects without gender implication. The results are contrary to the study by Oladayo & Oladayo (2012) who investigated the effect of direct and indirect instructional strategies on students’ achievement in Mathematics and reported that gender significantly determined the effect of direct instructional strategy with male students responding more positively to direct instruction than their female counterparts. Despite non-significant gender impact, the two strategies have proven very effective among participants for this study.

**Conclusion**
This study investigated the effect of Play-Based Intervention and Direct Instruction strategy on English mastery ability among pupils with hearing impairment in Lagos State, Nigeria. The results revealed that both Play-Based Intervention and Direct Instruction were effective on participants’ English mastery abilities though there was no implication of gender on the outcome of the treatments. It can then be inferred the two interventions are very adequate for teaching elementary school pupils as they have been proven experiential among the participants and involves active participation, which makes lessons less burdensome.

**Recommendation**
It is recommended that Play-Based Intervention and Direct Instruction should be employed to teach language to children with hearing impairment at the basic level as these will enhance their ability to develop and master vocabulary usage. However, while using Play-Based Intervention, teachers should, as matter expediency, blend both child-directed and teacher mediated play-based learning so as to actively involve both teachers and pupils in order to record desired outcomes.
References


Vygotsky, L.S. (1967). Play and its roles in the mental development of the child. Soviet Psychology. 5(3) 6-18
MANAGING TEACHERS' CONFIDENCE IN HIGHER EDUCATION TEACHING PROFESSION IN ADAMAWA STATE, NIGERIA

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Abstract
This study attempted to obtain empirical evidence on managing teachers’ confidence level in higher education teaching profession. The sample for this study was 152 teachers selected through simple random sampling technique from a population of 1453 teachers’ from College of Education Hong and Federal College of Education Yola in Adamawa State. The instrument for data collection was a self-structured 8 items questionnaire. Face and content validity of the questionnaire was done with the assistance of 3 experts in the field of Education. The researchers used Cronbach Alpha method to determine the reliability of instrument and Alpha value of 0.87 was obtained. Data collected were analyzed using descriptive statistic of mean and standard deviation. Findings from the study revealed that teachers’ confidence level in higher education teaching profession is significantly high. Therefore, the study recommended that the authority should organize capacity building workshop periodically so as to keep pace of teachers’ confidence level higher.

Key Words: Teachers, Confidence, Higher, Education, Teaching, Profession.

Introduction
Researches in higher education teaching have focused on two main areas. First, some researchers focused on teachers’ conceptions of teaching, and have shown to vary from conceiving ideas by the teacher and imparting information to students to constructing knowledge with students through interaction (Kember & Kwan 2000; Samuelowicz & Bain, 2001). Secondly, some researchers concentrated on teachers’ approach to teaching; that is, how teachers actually go about their teaching activities in the school.
Researches have shown that teaching can be approach through student-centred or teacher-centered approach. The student-centred approach is described as a way of teaching that is interactive in nature due to the level of students’ involvement. Students’ are active in the class using this approach because the lesson is students’ focused. The teacher-centered approach on the other hand is described as a way of teaching that is not interactive because students’ are less or not involved in the lesson. The students are not active in the class, because the lesson is centered on the teacher not the recipients. Teacher who enable interaction among the main elements of educational system such as student, educational program, environment and who take on the task of educating young individuals plays a distinctive and important role in the society (Hotaman, 2010).

Confidence as a concept is defined as a trait Bernstein, Clarke-Stearte, Roy, Srull and Wickens (1994) and as a situation-specific concept (Brodie, Reeve & Whittaker, 1995). A trait is relatively stable over time, hence if confidence is a trait and not situationally-specific, this means that those who lack confidence would remain lacking all through and there would have little knowledge on how to educate and implement educational programme that will increase learners’ understanding. However, if confidence is situationally-specific, it means that it can be raised and lowered depending on circumstances. Confidence is certainty in oneself and in one’s competences. Manning and Ray (1993) posited that it is calmness and assertiveness during social interaction. However, the issue of confidence and competency has been discussed widely within the educational literature and is most developed within Bandura’s concept of perceived self-efficacy (Bandura, 1994). Adopting the opinion that ‘what people think, believe and feel affects how they behave’ (Bandura, 1986). Perceived self-efficacy submits that a person’s beliefs about their own capabilities will directly affect their confidence and performance. The development of self-efficacy is complex, but seem to be a number of critical elements. These includes opportunities to see other people manage tasks successfully, allied to peer persuasion that one has the confident and capability to succeed in given activities.
In a study carried out on emotions and confidence within teaching in higher education, by Postareff and Lindblom-Ylänne (2011). It was found that teachers with confidence have mastery of their subject matter as well as being able to teach their students well. Research also affirmed that there are connections between teachers’ confidence and approach to teaching (Åkerlind 2007 & Sadler, 2009). A study by Postareff, Lindblom-Ylänne, and Nevgi (2007) asserted that when teachers show a high level of student-centeredness, they also exhibit a high level of self-efficacy which is seen in this study as teachers’ confidence level in the performance of a given task. Certainly, when teachers’ show lower level of student-centeredness, self-efficacy beliefs are described to be similarly lower. It has been proposed that teachers’ with a more student-centered approach to teaching are likely to have high confidence level due to the nature of their teaching method (Gordon, Petocz, & Reid, 2007). Essentially, when examining beginners of higher education teaching, Sadler (2009) found that teachers’ confidence has significant relationship with individual’s perceived content and pedagogical knowledge with more emphasis on content knowledge that appeared to predominate. This means that if teachers perceive that they have good level of content knowledge, confidence tends to be high. While, high level of confidence is often described in conjunction with taking risks and trying out new ways of teaching. It is against this backdrop that the researchers’ tend to conduct the study on managing teachers’ confidence in higher education teaching profession in Adamawa State, Nigeria.

**Literature Review**

Gu and Papageorgiou (2016) explored the relationships among teacher confidence, learning, and test performance within the English-for-teaching course in China, Italy and Mexico. Research objective was to examine the relationships among the three components within the English-for-Teaching course. Two research questions were raised and 683 teachers which were the test takers constituted the sample of study. Participants were asked to rate their level of confidence in conducting classroom tasks in English by responding to the 22 questions in the pre-course planner. Data analysis were conducted using mean, standard deviation and one-way analysis of variance. Finding revealed teachers confidence level to be high in curriculum learning in English for teaching course.
Both studies were similar in the usage of teacher confidence as variables, but on different scopes. Meanwhile Gu and Papageorgiou (2016) conducted their study in three countries of China, Italy and Mexico while this study is sought to assess level of teachers confidence in higher education teaching profession in Adamawa State, Nigeria.

Lloyd, Braund, Crebbin, and Phipps (2000) investigated primary teachers' confidence about and understanding of process skills in England. Purpose of the study hinges on examining teachers' confidence in teaching of process skills. Sample of the study comprises 30 teachers from 15 primary schools. Four research questions were raised to guide the study. Analysis of the data were conducted by simple percentages, while finding revealed teachers confidence level to be high in teaching processes skills in the realm of estimation, communication, measuring and observation while teachers confidence recorded average level on processes with regards to predicting, planning investigations and drawing. Lloyd, Braund, Crebbin, and Phipps (2000) researched their study in primary school level of education in England while this study examined teachers' confidence in higher education in Adamawa State, Nigeria. Apparently, both studies were similar in the area of teacher confidence as variables, but sample of the study and method of data analysis were quite different.

**Research Objective**
The research objective of this study is to assess managing teachers' confidence in higher education teaching profession in Adamawa State, Nigeria. In the context of this study, the specific objective is:

1. To identify teachers' confidence level in higher education teaching profession in Adamawa State.

**Research Question**
The following research question raised to guide the study

1. What is the level of teachers' confidence in higher education teaching profession in Adamawa State?

**Methodology**
The study is a descriptive research design. The study collected data on level of teachers’ confidence in higher education teaching
profession. The population for the study comprised 1453 teachers' from College of Education Hong and Federal College of Education Yola. Researchers selected 152 teachers through simple random sampling technique that constituted the sample for the study. An instrument with eight items was used for data collection. This instrument was validated by three experts from the Department of Science Education, Modibbo Adama University of Technology Yola. Consequently, their contributions and suggestions were factored in while drafting the final copy of instrument. Cronbach Alpha was used to determine the reliability of the instrument. A reliability Alpha of 0.87 was obtained. A five point scale of Very High Level (VHL=5), High Level (HL=4), Moderate Level (ML=3), Low Level (LL=2), Very Low Level (VLL=1) was used in the instrument. The researchers visited the colleges and administered the instrument to respondents with the help of four research assistants. All copies of the instrument administered were returned and found valid for analysis. Data collected were analyzed using descriptive statistic of mean and standard deviation. The decision rule for research question is: Very High Level (VHL) with 4.5-5.00, High Level (HL) with 3.50-4.49, Moderate Level (ML) with 2.50-3.49, Low Level (LL) with 1.50-2.49, Very Low Level; (VLL) with 0.50-1.49 real limit which was used to established the teachers' confidence level.

Result
What is the level of teachers' confidence in higher education teaching profession?

Table 1: Teachers' Confidence in Higher Education Teaching Profession

<table>
<thead>
<tr>
<th>S/n</th>
<th>Items</th>
<th>SD</th>
<th>Mean</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I have good approach to teaching.</td>
<td>1.37</td>
<td>3.79</td>
<td>High</td>
</tr>
<tr>
<td>2</td>
<td>I have good content knowledge.</td>
<td>1.38</td>
<td>3.81</td>
<td>High</td>
</tr>
<tr>
<td>3</td>
<td>I have good relationship</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
with my students.  

<table>
<thead>
<tr>
<th></th>
<th>Level of Teachers’ Confidence</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Grand Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Teaching profession provides opportunity for Knowledge acquisition.</td>
<td>1.34</td>
<td>3.73</td>
<td>High</td>
</tr>
<tr>
<td>5</td>
<td>I have good pedagogical knowledge</td>
<td>1.39</td>
<td>3.86</td>
<td>High</td>
</tr>
<tr>
<td>6</td>
<td>Teaching environment is peaceful.</td>
<td>1.36</td>
<td>3.78</td>
<td>High</td>
</tr>
<tr>
<td>7</td>
<td>Mastering of my subject builds confidence in my teaching.</td>
<td>1.32</td>
<td>3.69</td>
<td>High</td>
</tr>
<tr>
<td>8</td>
<td>As a teacher, I teach my students well.</td>
<td>1.46</td>
<td>4.57</td>
<td>High</td>
</tr>
</tbody>
</table>

Grand Mean 3.93 High

Note: Very High Level (4.5-5.00), High Level (3.50-4.49), Moderate Level (2.50-3.49), Low Level (1.50-2.49), Very Low Level (0.50-1.49).

Findings and Discussion

Table 1 revealed Lecturers’ responses on level of teachers’ confidence in higher education teaching profession in Adamawa State. The data on Table 1 reveals that all the 8 items had their grand mean values of 3.93 which indicates high level. This shows that the respondents affirmed that teachers’ confidence in higher education teaching profession in Adamawa is of high level. The table also indicates the standard deviation of the 8 items ranges from 1.32 to 1.46 which means that the respondents’ responses were nearly close to one another.

Fundamentally, in the context of the eight items, respondents agreed that they have good approach to teaching with a mean score of 3.79. Respondents’ considered that teachers’ with good content knowledge have high confidence during teaching with a mean score of 3.81. Respondents also agreed that they have good
relationship with their students which enhance their confidence. They also agreed that teaching profession provides high opportunity for acquisition of knowledge. Essentially, they agreed that teachers’ confidence is high with regard to good pedagogical knowledge. Respondents also agreed that teaching environment is peaceful and further agreed that mastering of subject matter gave them high confidence in teaching as they teach their students well. In summary, the finding from the study revealed that the level of teachers’ confidence in higher education teaching profession in Adamawa is high with grand mean of 3.93. This finding is consistent with the finding of Gu and Papageorgiou (2016) who found teachers confidence to be high in English-for-teaching course in China, Italy and Mexico respectively.

**Recommendation**

Since the finding from the study revealed high level of teachers’ confidence in higher education teaching profession in Adamawa. The researchers’ recommended that, the authority should organize capacity building workshop periodically to teachers’ so as to keep pace of teachers’ confidence level higher.

**Conclusion**

The study suggested that confidence and content knowledge are essential in an individual teacher’s decision to teach in a particular way that reflect better teaching understanding with students. This indicates a need to enhance teachers’ confidence in higher education teaching profession. The results of this study are based on teachers’ general descriptions of their own confidence level in the teaching profession.

**References**


BRIDGING THE YORÙBÁ NUMERAL GAP BETWEEN THE OLD AND THE NEW GENERATION OF THE DIGITAL WORLD

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Abstract
Numeracy is an integral part of any language. For any linguistic discourse in a language to be meaningful, it should make reference to numbers. Yorùbá of the olden days made use of cowries to transact business; they also practiced trade by barter which had its short comings. Also Yorùbá language employs vigesimal numerals of counting which involves complex calculation and had led various users of this new generation to neglect its use. By way of contribution to solving the problem, this study presented a bilingual approach of English and Yorùbá language in finding equivalent to Arabic numerals. The Vigesimal Yorùbá language numerals which include addition and subtraction were removed. Thus making counting in Yorùbá very easy to be able to accommodate large sums of numerals and eventually be incorporated into computer in this new digital era when numbers are highly emphasised in the use of Bank Verification Number (BVN), Automated Transmission Machine (ATM), Account number, data codes etc. Samples of bilingual approach of Yorùbá decimal numerals were highlighted. The study concluded that Decimal Yorùbá should be adhered to for easy counting and calculation and will be easily manipulated in the technological world thus the new generation to make new discoveries which cannot be stolen, for they are processed and showcased with Yorùbá numerals like Chinese, Koreans etc The study therefore recommended that policy makers, curriculum planners teachers and stake holders should embrace and adopt Decimal Yorùbá numerals for its global acceptability and incorporation into science and technological world.
**Key words:** Vigesimal Yorùbá Numerals, Decimal Yorùbá Numerals Bilingual Approach, Digital World old and New Generation.

**Introduction**

Numerals are one of the aspects of the day to day socio-economic and linguistic life of people. Learning the Yorùbá numerals has its importance as its structure is used in everyday conversation (Fabunmi, 2009 Lapite, 2013 and Babarinde, 2013) explain that counting is an indispensable part of man. Every community has its own numbers and words used for counting. This attests to the claim that language permeates every aspect of human activities.

The battle for the sustenance of Yorùbá Language is not yet over; rather than the language being increasingly appreciated and embraced by the owners, there is evidence that it is declining (Adegbija, 2004; Fabunmi & Salawu, 2005; Fakoya, 2008). One of the aspects of Yorùbá language identified as being so seriously endangered is its numerals system. Yorùbá language employs a Vigesimal numeral structure, where counting is done in multiples of twenty- (ogún), two hundred-(igba), two thousand-(egbà) and (twenty thousand – (ọkékan), (Kanday, 1987). For instance, finding number equivalent to 256 will require a lot of mathematical task before arriving at the answer which is Ọtálélùgbà ó dínmęrin (60 + 200 – 4), while the numerals are called as they are written in English decimal system.

Numbers in this century play an important role so as to be able to meet the global challenge which is digital in terms of counting, budgeting, numbering, operation of Automated Transmission Machine (ATM) /Master card pin code, account numbers and recharge cards. All these transactions make use of numbers. There is therefore need to find standard Yorùbá numerals which will be in consonance with English - the language which has the largest numbers of speakers in the world, thus making use of standard Yorùbá numerals which will be globally accepted in day to day activities of people in terms of commerce, religion, politics and education. This can also create an avenue for Yorùbá numerals to be incorporated into computer language as technology evolves. This can be realized by changing the Yorùbá numeral system from vigesimal to decimal.
This paper is significant for curriculum planners to plan pragmatic and dynamic curriculum which will move in consonance with the global world in terms of numerals. It will also enhance the mastery of basic skills of the two languages and their numerals. Yorùbá numerals will have equal values as English which can be incorporated into computer in the nearest future and be globally acceptable. Contractive linguistics is employed to explain why some features of a target language are more difficult to acquire than others. The vigesimal pattern of counting in Yorùbá language is complex and orthodox while the English decimal system is straightforward and easily comprehensible. Lado (1957) remarks that individuals tend to transfer and understand the forms and meaning of their language and culture to the foreign language when attempting to grasp and understand the language and culture as practiced by the native speakers. This implies that Yoruba speakers are motivated to learn Yorùbá numerals being their native language. By using the decimal system of numeracy, the Yorùbá conforms to the universal linguistic norms. The bilingual approach of English and Yorùbá languages is the mode of converting numerals from vigesimal to decimal.

<table>
<thead>
<tr>
<th>Figures</th>
<th>Vigesimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>87</td>
<td>Ṣẹ̀tàdìn ni Àádórun-ún</td>
</tr>
<tr>
<td>116</td>
<td>Èétrìndínlògófà</td>
</tr>
<tr>
<td>242</td>
<td>Òjílélúgbá ó léméjì</td>
</tr>
<tr>
<td>256</td>
<td>Òtàlélúgbá ó dínmérìn</td>
</tr>
<tr>
<td>303</td>
<td>Èétàlèníòòdùnrùn</td>
</tr>
<tr>
<td>429</td>
<td>Okóolènírinwò ó lèmèsàn-án</td>
</tr>
</tbody>
</table>
Trade by Barter
The Yorùbá people of southwestern Nigeria have been known prior the 19th century as a nation of traders; this reputation extends to both men and women. Markets were, and are still held at regular intervals, usually every four days, to coincide with the traditional Yorùbá four-day week. The location and the products of the market days rotate. Before the introduction of cash economy in Nigeria by the European colonialists in the nineteenth century, the country's economy had been localized and trade was carried on by barter (Bovill 1970; Hanson 1972, and Chukwu, 2010). People brought their products like yam to exchange with cassava or any other products. This was practiced for long, but had its demerits.

Figure 1

Demerits of Trade by Barter
The following are some of the demerits of trade by barter

- Problem of double coincidence – A situation where many people brought the same products, many would go home with their products.
- Store of wealth or storage problem – In the process of not able to exchange with products of intention and lack of good storage, the commodities would be wasted.
- Problem of measurement – A non-accurate measure of commodity, exchanging palm oil with groundnut, obviously, and one product will attract more value than the other.
Cowries Age
Cowrie was the first pan-regional currency to be used in the whole West African sub-region, and it was first adopted at Orile-Keesi together with the chain of extensive regional exchange networks that concentrated on the trans-Atlantic trade. Cowries were the basic unit of currency. These shells have been treated with disdain by Europeans, partly because of the debasement of their value during the nineteenth century. However cowries’ shells were the basic unit of currency in Africa. Cowries were either counted in groups of 5 or pierced and threaded in strings of 40.

As part of their commerce, the Yorùbá had to count huge numbers of cowries. When a cowry counter had to count thousands of shells, he would empty the bag onto the floor and start counting 20s by making 4 groups of 5 shells each. Then the counter would make 5 groups of 20 to make 100. Then 2 groups of 100 would be pushed together to make 200. The Yorùbá also learned to estimate when counting large quantities of cowrie shells (Ogundiran; 2000).

Demerits of Cowries
Cowries appear too heavy for exchange and are cumbersome for counting.

Era of Coin and Currency
The currency adopted, initially was called pound and shillings which is being referred to as “apo and sile” by non-educated. Today, Naira is used in Yorùbá land, but up till today, some non-educated cannot use and interpret Naira and kobo. Obviously, the counting cannot accommodate large figures because of its vigesimal system. There is therefore, the need to find a globally acceptable Yorùba decimal numeral system.
The Digital Generation
Soyoye and Lajuyigbe (1993) in their investigation of the native speakers on the numerals, state that:

*The general tendency brought out by this study is that the Yorùbá speakers are fast losing grip with the numeral system of their mother tongue and that the 10-20 age group is more affected than the other age groups. The state of the knowledge of the Yorùbá numeral system by the native speakers can be explained by the fact that the Yorùbá prefer to use the English numeral system even when conversing in Yorùbá. This may be due to relative difficulty of the Yorùbá numeral system when compared to that of English.* (69)

Awobuluji (1992) on the other hand comments on the nature of the numerals system of Yorùbá that:

*Most of the numerals in the language are derived, and they are derived in an often very cumbersome and complicated manner involving multiplication, addition and subtraction. Thus in traditional Yorùbá counting, seventy one for instance is okan le laadorin meaning one plus four twenties minus ten i.e. 1+ (20 x 4) −10 (5).*

The Yorùbá native speaker prefers the use of English decimal numeral system when conversing in Yorùbá language to the Yorùbá vigesimal system. This is because the decimal system does not task the comprehension skill of the learners unlike the Vigesimal system which requires a series of cognitive processes. Even nearly all electronic and print media have adopted the English decimal system to the detriment of Yorùbá vigesimal system.
Table 002: Vigesimal versus Decimal Numerals

<table>
<thead>
<tr>
<th>Figures</th>
<th>Vigesimal N</th>
<th>Decimal</th>
</tr>
</thead>
<tbody>
<tr>
<td>87</td>
<td>ÈtèdínnìÀádòrùn-ùn</td>
<td>Ogórin atì Èéjì</td>
</tr>
<tr>
<td>116</td>
<td>Èerìndínlógófà</td>
<td>Ogórin-ùnkan atì Èfálá</td>
</tr>
<tr>
<td>242</td>
<td>Òjìlélúgbá ó léméjì</td>
<td>Ogórin-ùn méjì, ogoji atì Èjì</td>
</tr>
<tr>
<td>256</td>
<td>Òtàlélúgbá ó dínìmèrin</td>
<td>Ogórin-ùn méjì, Àádóta atì Èfà</td>
</tr>
<tr>
<td>303</td>
<td>Ètèléléòòdúnìríùn</td>
<td>Ogórin-ùnìmètà atì Èta</td>
</tr>
<tr>
<td>429</td>
<td>Okòólénnírinwó ó dìnìmèsn-àn</td>
<td>Ogórin-ùn merin, ogún atì Èsàn-àn</td>
</tr>
<tr>
<td>678</td>
<td>Òrinlélégbéta ó dínìmèjì</td>
<td>Ogórin-ùn méfà, Àádòrùn-ùn atì Èjìq</td>
</tr>
<tr>
<td>920</td>
<td>Okòóléléèègbèrùn-ùn</td>
<td>Ogórin-ùn mèsàn-àn atì ogùn</td>
</tr>
</tbody>
</table>

As a means of sustaining the language and its counting system, and its acceptability in the digital world, some modifications should be adopted into Yorùbá numerals which will be in consonance with English numerals and have equivalent value of numerals, thus making it easy for Yorùbá numerals to be incorporated into the computer in the nearest future. Therefore, this paper suggested the modifications to be adopted into the Yorùbá numerals. The models are as follows:
<table>
<thead>
<tr>
<th>Figure</th>
<th>Yorùbá</th>
<th>English</th>
<th>Suggested numerals</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Ogun 20</td>
<td>twenty 20</td>
<td>Ogun 20</td>
</tr>
<tr>
<td>21</td>
<td>Oókànélélógún 1 + 20</td>
<td>twenty 10 1</td>
<td>Ogun ati oókan 20 + 1</td>
</tr>
<tr>
<td>22</td>
<td>Eéjilélógún 2 + 20</td>
<td>twenty 20 2</td>
<td>Ogun ati Eéjì 20 + 2</td>
</tr>
<tr>
<td>23</td>
<td>Ètèlàélógún 3 + 20</td>
<td>twenty 3</td>
<td>Ogun ati Ètèta 20 + 3</td>
</tr>
<tr>
<td>24</td>
<td>Èrèrinélógún 4 + 20</td>
<td>twenty 4</td>
<td>Ogun ati Èrèrin 20 + 4</td>
</tr>
<tr>
<td>25</td>
<td>Àárùndínlógbôn -5 + 30</td>
<td>twenty 5</td>
<td>Ogun ati Àárùn-ùn 20 + 5</td>
</tr>
<tr>
<td>26</td>
<td>Èrèrindínlógbôn -4 from 30</td>
<td>twenty 6</td>
<td>Ogun ati Èfè 20 + 6</td>
</tr>
<tr>
<td>27</td>
<td>Ètèdádínlógbôn -3 from 30</td>
<td>twenty 7</td>
<td>Ogun ati Èje 20 + 7</td>
</tr>
<tr>
<td>28</td>
<td>Èèjídínlógbôn -2 from 30</td>
<td>twenty 8</td>
<td>Ogun ati Èjè 20 + 8</td>
</tr>
<tr>
<td>29</td>
<td>Oókàndínlógbôn -1 from 30</td>
<td>twenty nine 9</td>
<td>Ogun ati Èsàn-án 20 + 9</td>
</tr>
</tbody>
</table>
### Counting of Numerals from Thirty and Above

<table>
<thead>
<tr>
<th>Figure</th>
<th>Yorùbá Numerals</th>
<th>English Numerals</th>
<th>Suggested Numerals</th>
<th>Yorùbá</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>Ògbòn 30</td>
<td>Thirty 3 x 10</td>
<td>Ògbòn 30</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>Àádóta 10 from 60</td>
<td>Fifty 5 x 10</td>
<td>Àádóta 10 from 60</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>Ogóta 20 x 3</td>
<td>Sixty 6 x 10</td>
<td>Ogóta 20 x 3</td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>Àádórìn 10 from 80</td>
<td>Seventy 7 x 10</td>
<td>Àádórìn 10 from 20 x 4 (80)</td>
<td></td>
</tr>
<tr>
<td>80</td>
<td>Ogórìn 20 x 4</td>
<td>Eighty 8 x 10</td>
<td>Ogórìn 20 x 4</td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>Àádórùn-ún 10 from 100</td>
<td>Ninety 9 x 10</td>
<td>Àádórùn-ún 10 from 20 x 5 (100)</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>Ogórùn-ún 20 x 5 100</td>
<td>One hundred 1x100</td>
<td>Ogórùn-únkan 20 x 5 (100 x 1)</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>Igba 200 (basic)</td>
<td>Two hundred 2 x 100</td>
<td>Ogórùn-ún méjì 20 x 5 (100 x 2)</td>
<td></td>
</tr>
<tr>
<td>300</td>
<td>QOdùnùn 300 (basic)</td>
<td>Three hundred 3 x 100</td>
<td>Ogórùn-ún méta 20 x 5 (100 x 3)</td>
<td></td>
</tr>
<tr>
<td>400</td>
<td>Irìnwò 400 (basic)</td>
<td>Four hundred 4 x 100</td>
<td>Ogórùn-ún mérin 20 x 5 (100 x 4)</td>
<td></td>
</tr>
<tr>
<td>500</td>
<td>Édégbèta 100 from 200 x 3 (basic)</td>
<td>Five hundred 5 x 100</td>
<td>Ogórùn-ún marùn-ún 20 x 5 (100 x 5)</td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>Egbèta 200 x 3</td>
<td>Six hundred 6 x 100</td>
<td>Ogórùn-ún méfa 20 x 5 (100 x 6)</td>
<td></td>
</tr>
</tbody>
</table>
The suggested numerals should also be adapted in consonance with other languages by removing its complexity of combination in addition, subtraction and multiplication.

Table 004: Counting from hundred

<table>
<thead>
<tr>
<th>Figure</th>
<th>Yorùbá Decimal System</th>
<th>English Decimal System</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Ogórun-Únkan</td>
<td>One hundred</td>
</tr>
<tr>
<td>101</td>
<td>Ogórun-Únkan àti Oókan</td>
<td>One hundred and one</td>
</tr>
<tr>
<td>110</td>
<td>Ogórun-Únkan àti Eýwàà</td>
<td>One hundred and Ten</td>
</tr>
<tr>
<td>118</td>
<td>Ogórun-Únkan àti Òjọọláá</td>
<td>One hundred and Eighteen</td>
</tr>
<tr>
<td>140</td>
<td>Ogórun-Únkan àti Ogóji</td>
<td>One hundred and Forty</td>
</tr>
<tr>
<td>170</td>
<td>Ogórun-Únkan àti Àádórin</td>
<td>One hundred and Seventy</td>
</tr>
<tr>
<td>200</td>
<td>Ogórun-Ún Méjì</td>
<td>Two hundred</td>
</tr>
<tr>
<td>300</td>
<td>Ogórun-Ún Méta</td>
<td>Three hundred</td>
</tr>
<tr>
<td>400</td>
<td>Ogórun-Ún Mérin</td>
<td>Four hundred</td>
</tr>
<tr>
<td>500</td>
<td>Ogórun-Ún Márún-Ún</td>
<td>Five hundred</td>
</tr>
<tr>
<td>900</td>
<td>Ogórun-Ún Mésán-án</td>
<td>Nine hundred</td>
</tr>
<tr>
<td>1000</td>
<td>Egbérúnkan</td>
<td>One thousand</td>
</tr>
<tr>
<td>1,500</td>
<td>Egbérúnkan àti Ogórun-únmárún-ún</td>
<td>One thousand and five hundred</td>
</tr>
<tr>
<td>2,000</td>
<td>Egbérún Méjì</td>
<td>Two thousand</td>
</tr>
<tr>
<td>2,225</td>
<td>EgbérúnMéjì, Ogórun-únméjì, Ogúnààáárún-ún.</td>
<td>Two thousand and Two hundred and twenty five</td>
</tr>
<tr>
<td>2,600</td>
<td>Egbérún-Méjì, àti Ogórun-únméfà,</td>
<td>Two Thousand and Six hundred</td>
</tr>
<tr>
<td>3000</td>
<td>Egbérún Méta</td>
<td>Three thousand</td>
</tr>
<tr>
<td>6000</td>
<td>Egbérún Mefà</td>
<td>Six Thousand</td>
</tr>
<tr>
<td>20,000</td>
<td>Egbérúnlojà Ogún</td>
<td>Twenty Thousand</td>
</tr>
<tr>
<td>100,150</td>
<td>Egbérúnlojàogórun-ún,</td>
<td>One hundred</td>
</tr>
</tbody>
</table>
For the sake of uniformity with other languages, it is ideal for the numbers like Million, Billion and Trillion should be borrowed as loan words into Yorùbá numerals. Salami (1983) opines that one of the reasons for loan words is the need for a language to keep pace linguistically with the different development of modern life in social and religious matters; in commerce and industry, science and technology.

<table>
<thead>
<tr>
<th>COUNTING IN THOUSAND, MILLIONS AND BILLIONS</th>
<th>COMPARING THE TWO TARGETED LANGUAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,567 English</td>
<td>Five thousand, five hundred and sixty-seven</td>
</tr>
<tr>
<td></td>
<td>Egbèrún Márùn-ún, Ogórùn-únmárùn-ún, Ogóta àti ééje</td>
</tr>
<tr>
<td>70,256 English</td>
<td>Seventy thousand, two hundred and fifty-six</td>
</tr>
<tr>
<td></td>
<td>Egbèrún lónà àádórin, ogórùn-ún méjì àti Ogórùn àti ìfà</td>
</tr>
<tr>
<td>887,602 English</td>
<td>Eight hundred and eighty seven thousand, six hundred and two</td>
</tr>
<tr>
<td></td>
<td>Egbèrún lónà ogórùn-ún méjì àti Ogórùn àti eéejì, ogórùn-ún méfà àti eéjì</td>
</tr>
<tr>
<td>2,345,510 English</td>
<td>Two million, three hundred forty-five thousand, five hundred and ten</td>
</tr>
<tr>
<td></td>
<td>Mílíò méjì, egbèrún lónà Ogórùn-ún méta, Ogójì àti aárùn-ún, Ogórùn-ún márùn-ún àti ìfáwáà</td>
</tr>
<tr>
<td>102,344,502 English</td>
<td>One hundred and two million, three hundred and forty-four thousand, five hundred and two</td>
</tr>
<tr>
<td></td>
<td>Mílíò lónà ogórùn-ún kan àti eéjì, egbèrùn lónà ogójì àti eérùn, ogórùn-ún márùn-ún àti eéjì</td>
</tr>
</tbody>
</table>
| 50,342,767,102 English                           | Fifty-billion, three hundred and forty-
Yorùbá two million, seven hundred and sixty-seven thousand, one hundred and two Bílìò nù ló aadota milìò nù lónà ogógún-ún méta, ogójì àti eéji, egbèrún lóna ogógún-ún méje, ogọta àti eéje, ogógún-únkan àti eéji.

Longe (2009) and Adeyinka (2005) opine that there is need for Yorùbá decimal if both the young and old will be involved in its use in everyday activities. Fakinlede (2006) describes some of the attributes of an effective number system to be adapted into Yorùbá numerals.

1. It must be called as it is written
2. It must be written as it is called
3. It must be capable of handling numbers with as many figures as desired.
4. It must be able to do this in a timely fashion compared to other numbering system.
5. It must be capable of being taught to a six year old in its entirety.
6. Its learning must not become a chore in itself.
7. It must be capable of being easily manipulated.

Fakinlede (2004) also points out that if Yorùbá would be counted as one of the major languages of the world, its complex numerical system would have to be simplified. Science and technology, the engines and machines that drive the modern world depend largely on number manipulations. This means that the system of performing rigorous mathematical mechanics before arriving at a given quantity has to change.

**Transmitting Old Historical Concepts to the New Generation - Discoveries**
To preserve Yorùbá culture, norms and values, many steps should be taken.

- Cowries can be made friendly to children by being used as toys such as toy blocks for objects such as cars, houses, instructional materials to teach shapes, letters abacus and numbers, medium of advertisement on billboards or as decorations.
• Bilingual dice game: Decimal Yoruba numerals can be transmitted to the new generation by creating a facilitating atmosphere that will arouse the interest of the young ones to learn the Yoruba numerals through “Bilingual Dice Game”. The game will involve two languages with the figures, while playing the game, the learners would learn the two languages together.
Decimal Yoruba numerals can be incorporated into children talking toys in numerals of dual languages (English and Yoruba).

- Google map describing the road signs, places, distances, time, kilometers and their figures can be written in dual languages (English and Yoruba).
- Customer care line can include the counting or finding equivalent to Yoruba numerals in their interacting with people, this would make it easier for people to understand the new Yoruba numerals decimal system.
- Electronics like television, bluetooth speakers, laptops, mobile phones and radio, can also make use of the new
Yoruba decimal numerals while passing information to users.

- **Social media:** new Yoruba decimal numerals can be used on social media to communicate to the users like facebook, twitters, you tube, Whatsapp, Instagram etc.
- **New Yoruba decimal numerals** can also be used for clocking system, timing, date and purposes to help people to use the numerals in their day to day activities.
- **New Yoruba decimal numerals** can be emphasized in news broadcasting for easy understanding by listeners and any layman.
- **Yoruba decimal numerals** are needful in technological advancement by manufacturing different products in measuring weight, height, intensity, temperature, and gravity which can lead to discoveries of various inventions.
- **Music:** Yoruba decimal numerals can also be beneficial to musicians in counting musical rhythms, timing, speed and volumes.
- **Currency:** It can be of advantage for the indigenes in making use of Yoruba decimal numerals on Nigerian currencies, e.g. $1000 = Egbešùn kan, $500 = ogórun-ún marun-un, $9300 = Egbešùn Mésàn-ăn ati ogórun-ún ìwá etc.
- **Numerals** can be incorporated into science and technology, hence leading people into deep conceptualization of discoveries which would eventually boost the economy of the environment of its speakers.

**Conclusion and Recommendations**

The Vigesimal numeral system with which the ancient people counted their herds of cattle and cocoa bags and which involved a lot of mathematical tasks cannot move Yorùbá numerals forward, apparently, Yoruba should adopt the decimal system of counting to be acceptable globally and into the digital world, especially presently that some of the developed countries are interested in learning Yoruba language, there is need for Yoruba numeral system to be changed from vigesimal system to decimal system thus being in consonance with the digital world.
Therefore, the following are suggested.

- Vigesimal Yorùbá numerals should be replaced with the decimal system which will be globally acceptable, especially in this age where transactions are digitalized.

- Yorùbá stakeholders and computer programmers should incorporate these decimal numerals into the computer, and social media like Facebook, Instagram, WhatsApp etc. thus involving Yorùbá numerals in the technological world, and giving it the same equivalent to numerals of other languages.

- The Yoruba decimal numerals should be incorporated into the curriculum of both the primary and secondary schools. This can also be ‘cash them young’ program, by which the Yorùba decimal numerals would be taught right from the primary level of education.

- Academic conferences, workshops, and seminars should be organized for all numerals and digital stakeholders to adopt the use of Yorùbá decimal numerals.

- Curriculum planners must plan pragmatic and dynamic curriculum contents with the numerals which would be in consonance with the global world.

- There should be textbooks on Yoruba decimal numerals which would be of advantage to the local, national, and international world, hence making Yoruba decimal numerals to be globally acceptable.

- Then, it will be easy for both the old and the new generations of Yorùbá to discover themselves and develop technologically, which would eventually boost Nigerian economy in the nearest future. Examples of the countries that depend on their languages and have developed technologically are China, Japan, and Korea who control their inventories and preserve their knowledge by using their language to impart the discoveries to their new generations. Today, Chinese, Koreans, Japanese and the German society are known for writing manuals for their products in their languages.

- Chinese are known for mobile phones, laptops, and toys

- Koreans are for the production of electrical appliances as air conditioner, refrigerator, and generator etc.
Japanese are known for Toyota vehicles as Corolla, Camry, Rave 4 etc
• Germans are known for vehicles such as vehicles like Benz series

Challenges and way forward
It is time for Yorùbá stakeholders to rise, fill the digital gaps through adoption of Youba decimal numerals (YDN), make discoveries, move forward, be known and accepted into the digital world.
• The present status of Yoruba language and its learning in schools shows that students have lost the grasp of the language; the private schools also worsen the situation by laying much emphasis on the speaking of English language. Obviously, learners would find it difficult to make use of Yoruba numerals thus, developing negative toward its learning.
• Parents also prefer their children communicating in English language thus, losing the grasp of Yoruba language rapidly while some children cannot speak their native language at all.
• The greatest problem is the inability of some teachers to acquire the skill of Yoruba numeral system and this makes it difficult to transmit its knowledge to learners effectively.
• Generally, Yoruba teachers are not motivated and encouraged both by the government and the community. They are regarded as being inferior to teachers of other subjects and its teaching is rendered ineffective. To improve the learning of Yoruba language and its numeral system, it is therefore recommended that;
• Realizing the importance of numbers in the contemporary world, with the use of check books, ATM, account numbers etc, the government should encourage both public and private schools in the implementation of the teaching strategy of conceptual decimal system of Yorùbá numerals and bilingual dice game to make Yorùbá numerals globally acceptable, in terms of commerce, communication, and religion, since no language can stand in isolation.
• Yoruba teachers should be well developed in acquiring more skills for effective teaching of the language by attending conferences, workshops and seminars.

• Government through curriculum planners should develop curriculum contents and changes, teaching method and materials in the realizations of national aspiration by planning a pragmatic and dynamic curriculum which will not hesitate to move in consonance with the global world especially in terms of numerals.

• Parents should be enlightened through all media of the importance of a learner’s mother tongue/first language as it would enhance the learning of other languages and skills.

• Published books and journals must be written on the decimal system of Yorùbá numerals used in this study which will serve as reference point and for the benefit of students, teachers and the entire populace.

References


Abstract
The specific design was a panel study used to determine the university administrators’ use of Management Information Systems (MIS) data processing and analysis methods for decision-making in South-East Nigerian universities. This study was conducted in the ten public universities in South-East, Nigeria. One research question and one hypothesis guided the study. The population of the study was made up of 589 university personnel consisting of Heads of Departments, Deputy Registrars and Directors of Management Information Systems (MIS)/Information and Communication Technology (ICT) Units in the universities. The sample of the study was made up of 30 respondents. Data were collected using a 10-item questionnaire developed by the researchers and titled: “Management Information Systems Data Processing and Analysis Methods for Decision–Making Questionnaire” (MISDPAM). Three experts from University of Nigeria, Nsukka validated the instrument. A reliability coefficient of 0.88 was obtained for the instrument. The experts’ panel was made up of 30 experts. During the two round surveys, the 10-item questionnaire was administered to the respondents twice. The 10 items that reached the panelist consensus in the round two survey were retained for data analysis. The mean score was used to answer the research question. T-test was used to test the hypotheses. The following were the major results of the study: 10 data processing and analysis methods were accepted. There was no significant difference between the mean
responses of administrators and MIS experts regarding data processing and analysis methods. Based on the findings of the study, one major educational implication was that the MIS has a high potential for making relevant information available for decision making process. It was recommended that universities in South-East, Nigeria should adopt the MIS data processing and analysis methods identified to provide relevant information for effective and efficient management of the institutions and MIS units should organize workshops and seminars for the university administrators on how to analyze relevant data/information for MIS decision-making process in the universities.

**Keywords:** Management Information Systems (MIS), Decision-Making, Data Processing, Data analysis.

**Introduction**
Decision-making involves choosing among alternative courses of action for the purpose of solving a problem. Decision-making includes the process of diagnosis and resolution of a problem or an issue. According to Turban, Aronson & Liang (2004), decision making is a process of choosing among alternative courses of action for the purposes of attaining a goal or goals. Decision-making consists of a number of steps or stages such as recognition, formation and generation of alternatives, information search, selection and action.

Decision-making process starts with the intelligence phase, where reality is examined and the problem is identified and defined. In the university system, this phase occur at the strategic management level where problems are identified, classified and problems statement are made. Relevant data to the problems are collected and processed. Further, the data are sorted and merged with other data and computations are made, summarized and presented. In this process, the attention of the university administrators are drawn to all the problem situations by highlighting the significant differences between the actual and the expected, the budgeted or the targeted issues. The second phase, the design phase, involves inventing and developing a model that represents the system, analyzing the different alternatives and identifying the alternative course of action. The choice phase involves the selection of a proposed solution to the model. The solution is tested to determine its viability. As the proposed solution
seems reasonable, administrators may undertake the implementation and feedback processes. Successful implementation results in solving real problems while failure leads to a return to an earlier phase of the process. The above process could be achieved through MIS data processing and data analysis of the Management Information Systems.

Data processing involves the organization of data into its many different types so that it is usable for planning and decision-making purposes (Wako, 2003). Data processing utilizes data entry programmes which are carried out by trained encoders or data entry clerks and programme analysts. Data processing is achieved through the use of computer software and it ensures that data is compiled based on their various variables and arranged differently for different users (Momoh & Abdusalam, 2014). Data analysis involves looking more closely at the data and in various ways, in order to extract information useful for planning and decision-making. Analysis is done to provide information to planners, decision-makers, researchers, policy-makers, and other users so that they can establish whether their actions are appropriate or whether their actions need to be modified (Alter, 2013). The type of analysis undertaken is often aligned to the needs of different categories of administrators, especially policy and decision-makers.

Data analysis involves careful examination of the collected data, tables and charts in order to identify patterns, issues, trends and exceptions so as to draw meaningful conclusions, issues and solutions (Wako, 2003). It includes using different types of statistics to calculate indicators that can give additional insights regarding the performance of the university. Data analysis could be achieved by using any of the following technologies by the data analysts and programmers. Statistical Packages for Social Sciences (SPSS), which analyses data into different variables, On-Line Analytical Processing (OLAP), which reorganizes data in multidimensional structures, Data warehousing which provides central storage for data from multiple and heterogeneous sources and Knowledge Discovery (KDD), which utilizes data mining process, that enables the discovery of new and valuable information in available data sources. Data processing and Data analysis improves data security, data accuracy and fast information retrievals (Guru99, 2019).
The MIS processes use Structured Query Language (SQL) servers, and interfaces (Zaharie & Albescu cited in Andrei & Mihai, 2009). Also, OLAP and data warehousing technologies are efficient solutions for data analysis and can provide the necessary support to assist decisions by university administration. Data are also analyzed utilizing inferential statistics such as chi-test, t-test, f-test and descriptive statistics such as mean, mode, median, percentages and standard deviation (Al-Dhmour, 2010). Data Processing arranges data according to variables such as gender, course, department, faculty, course level and ability level for different targeted users such as students, lecturers, administrators, researchers and external bodies. Universities in Nigeria, including South-East universities could utilize these data processing and analysis strategies to enhance decision-making process in their institutions. Thus, the success of decision-making, which is the heart of administrative process, is highly dependent on availability of accurate and timely information. University administrators need an efficient and effective MIS which offers forecasting and tools capable of providing valuable information and an analytical overview of the university and, as such capable of assisting in decisions (Andrei & Mihai, 2009).

Management Information System (MIS) is basically concerned with the process of collecting, processing, analyzing, storing and transmitting relevant information for educational planning, decision-making and to support management operations in the universities. Boorne (2002) defined MIS as a structured, interacting complex of persons, machines and procedures designed to generate an orderly flow of information for use as the basis for decision-making in an organization. According to Moorty (2019), MIS is a decision-making instrument used by top management comprising of a set of controls. In Nigerian universities, MIS is designed to achieve the following objectives: to standardize the system of obtaining reports and statistical information, ensure that such information are accurate and timely and organize such information for planning and decision-making in order to improve utilization of resources (Fadekemi & Ajayi, 2007).

MIS outcomes could be utilized in the following decision-making areas in the universities, management of physical facilities; assessment of students’ academic performances; staff performance and development, undertaking new physical projects and approval of new academic programmes. Issues relating to students’
enrolment, staff recruitment and promotion, assessment of staff strength and allocation of quarters, offices and hostels utilize MIS outcomes in the university (Ajayi & Omirin, 2007). Other decision-making areas of MIS outcomes include allocation of courses to students and lecturers, appointment of VCs, DVCs, Deans and Directors and approving/assessing academic programmes in the university.

In analyzing the roles of MIS in decision-making process, Ustudy.in (2010) states that the quality of managerial decision-making depends directly on the quality of available information. The university administrators should therefore, cultivate an environment that encourages the growth and viable sprouting of quality information. MIS provides a fitting platform for good decision-making. Essentially, without an established system of getting information in MIS, it would be extremely difficult for universities to make their decisions (Kumar, 2006). This is because they will be forced to make baseless decisions due to lack of authentic information. Moreover, MIS normally lays a firm foundation for the establishment of concrete decisions through its systematic tools, timely information and adequate management policies and regulations.

Certain programmes in MIS have the capacity to give real-time updates of the concurrencies in the universities. These immediate update assist administrators to take necessary for multitask increases efficiency in the universities since several operations can be conducted simultaneously. With regards to decision-making, the capacity for multitasking ensures that decisions are made speedily when compared to those systems which can only handle one task at a time. Multiple users could access the same content all at the same time in an MIS without discrepancies (Jahangir, 2005). This potentiality boosts accountability and provides safeguard in decision-making.

MIS plays the crucial role of providing a wide range of streamlined options from which decision-makers are able to make their preferred choices (Vitall & Shivraj, 2008). This ensures that whatever choices are made by decision-makers, the outcome, more often than not, become positive decisions. According to Jawadekar (2006), having good choices guarantees viable decisions. As a guide, MIS protects the administrators when making critical decisions.
about the universities. As a result, key decision makers are guided from overstepping their boundaries or exceeding their responsibilities. This helps in checking and balancing decisions, thus ensuring that only proven decisions are made. According to Lingham (2006), the capacity to guide decision-making process ensures progress. The principles, strategies and modes of operation in MIS can be intellectually used by administrators to sieve between good and bad decisions (Jahangir, 2005). Once the sieving is done, good decisions are encouraged while the bad ones are sidelined and greatly discouraged. This ensures progress in terms of decisions made, which links up directly to improving decision-making process.

Management Information Systems (MIS) functions in three domains of collecting, processing and producing relevant information to support managerial operations (Samer & Rawan, 2018). Decisions founded on MIS tend to be accurate and viable and this encourages improvement in the administration of the universities. MIS provides reliable, timely and authentic information which assists in the control and evaluation of organizations such as the universities. Areas where MIS are utilized in the universities and thus enhance effective administration include the following: decision-making, data storage, budgetary control, time management and mandated reporting (Striefer, 1999). MIS databases are created which allows the university administrators to collect, process, store, retrieve and use all pertinent data to gain knowledge required for decision-making process. The stored data are easily accessed, retrieved and utilized in decision-making on timely basis. University administrators continually make decisions on students’ and staff records, registration, examinations, staff welfare, recruitment, payroll, quarters, hostel and office allocations, introducing/assessing new programmes, appointment of VCs, DVCs, Deans, Heads of Departments and budgeting for the effective administration of the universities. Universities in South-East Nigeria appear to be constrained in making these decisions due to the inadequacy of the MIS in the universities.

**Statement of the Problem**
University administrators in the South-East Nigerian Universities are facing challenges in making decisions in areas such as: students’ admissions and performance; project implementation; staff recruitments and promotions and programmes evaluation and other
areas. This could be as a result of not having the required data/information. Also, university administrators often do not have the required data or tools necessary to assist them in making financial decisions, in managing resources, engaging new staff, starting new projects or programmes. This may be as a result of administrators not utilizing MIS data processing and analysis methods in providing accurate data in the decision making process. Furthermore, University administrators are usually mandated to produce reports often on short notice for such agencies like National Universities Commission (NUC), Federal Ministry of Education, and other Donor-Agencies. These consume large amount of time for administrators if they have to collect, analyze and compile the reports on demand. Against this backdrop therefore, the researchers seek to determine university administrators’ use of Management Information Systems (MIS) data processing and analysis methods in providing data/information for decision-making in South East Nigerian universities

**Purpose of the study**
The purpose of this study was to determine university administrators’ use of Management Information Systems (MIS) data processing and analysis methods for decision-making by administrators of South-East Nigerian universities. Specifically, the study intended to determine:

1. Data processing and analysis methods appropriate for Management Information Systems (MIS) decision-making process by university administrators of South-East Nigerian universities.

**Research Question**
The following research question guided the study:

1. What data processing and analysis methods are appropriate for Management Information Systems (MIS) decision-making by university administrators of South-East Nigerian universities?

**Hypothesis**
One null hypothesis was formulated to guide the study and was tested at 0.05 level of significance.
1. There is no significant difference between the mean responses of administrators and MIS experts on the data processing and analysis procedures for decision-making by administrators of South-East Nigerian universities.

Method
The specific design was a panel study used to determine the university administrators' use of Management Information Systems (MIS) data processing and analysis methods for decision-making in South-East Nigerian universities. This study was conducted in the ten public universities in South-East, Nigeria. One research question and one hypothesis guided the study. The design of the study was a survey research. The population of the study was made up of 589 university personnel consisting of Heads of Department, Deputy Registrars and Directors of Management Information Systems (MIS)/Information and Communication Technology (ICT) Units in the universities. The sample of the study was made up of 30 experts selected from the ten public universities in South-East Nigeria. Data were collected using a 10 item questionnaire developed by the researchers and titled: “MIS Data Processing and Analysis Methods for Decision-Making (MISDPAM) Questionnaire”. The face validation of the instrument (MISDPAM) was achieved through three experts: one each from Educational Administration and Planning, Measurement and Evaluation, and a Director of MIS Unit from a public University in Nigeria. A 4-point rating scale of; Very Appropriate = 4, Appropriate = 3, Inappropriate = 2, Very Inappropriate = 1 was used to elicit responses from the respondents for data analysis. The reliability of the instrument was determined through trial-testing of the questionnaire on 17 respondents, made up of seven senior academic staff including Heads of Department, nine senior administrative staff and the Director, Digital Centre at Kogi State University, Anyigba, Kogi State, which is outside South-East, Nigeria.

The reliability of the instrument was determined using Cronbach Alpha Formula. A reliability coefficient of 0.88 was obtained for the entire instrument. The data were analyzed using Statistical Package for Social Sciences (SPSS). The mean and standard deviation scores of the items were used to answer the research question. Panelists' consensus was achieved through the mean and standard deviation of the questionnaire items. A mean
score of greater than or equal to 3.00 (Appropriate) with standard deviation of less than 1.00 indicated agreement among the panelists in the study. T-test was used to verify the null hypotheses at 0.05 level of significance.

Result

Research Question 1: What data processing and analysis methods are appropriate for Management Information Systems (MIS) decision-making by university administrators of South-East Nigerian universities?

Table 1: Mean responses on the data processing and analysis methods of the MIS (N=30).

<table>
<thead>
<tr>
<th>S/N</th>
<th>Data processing and analysis methods</th>
<th>X'</th>
<th>SD</th>
<th>Decision</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Utilizes software such as SPSS, OLAP, Data mining for data processing and analysis for decision-making.</td>
<td>4.00</td>
<td>.00</td>
<td>AP</td>
<td>1</td>
</tr>
<tr>
<td>2.</td>
<td>Process data according to variables such as courses.</td>
<td>3.97</td>
<td>.47</td>
<td>AP</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>Arrange data/information differently for different target users such as students, researchers, lecturers, administrators and eternal bodies.</td>
<td>3.87</td>
<td>.35</td>
<td>AP</td>
<td>3</td>
</tr>
<tr>
<td>4.</td>
<td>Process data according to variables such ability levels.</td>
<td>3.70</td>
<td>.47</td>
<td>AP</td>
<td>4</td>
</tr>
<tr>
<td>5.</td>
<td>Use descriptive statistics such as mean, mode, median, percentages and standard deviation to summarize data.</td>
<td>3.63</td>
<td>.56</td>
<td>AP</td>
<td>5</td>
</tr>
<tr>
<td>6.</td>
<td>Processes data according to variables such as departments.</td>
<td>3.63</td>
<td>.56</td>
<td>AP</td>
<td>6</td>
</tr>
<tr>
<td>7.</td>
<td>Process data according to variables such as faculties</td>
<td>3.47</td>
<td>.57</td>
<td>AP</td>
<td>7</td>
</tr>
<tr>
<td>8.</td>
<td>Processes data according to variables such as gender.</td>
<td>3.43</td>
<td>.50</td>
<td>AP</td>
<td>8</td>
</tr>
<tr>
<td>9.</td>
<td>Use inferential statistics such as chi-test, t-test and f-test to test hypotheses</td>
<td>3.43</td>
<td>.57</td>
<td>AP</td>
<td>9</td>
</tr>
<tr>
<td>10.</td>
<td>Provide data in form of charts</td>
<td>3.30</td>
<td>.65</td>
<td>AP</td>
<td>10</td>
</tr>
<tr>
<td>Cluster</td>
<td></td>
<td>3.64</td>
<td>.15</td>
<td>AP</td>
<td></td>
</tr>
</tbody>
</table>

AP = Appropriate

Data on Table 1 shows that all the listed items on data processing and analysis methods reached the respondents' consensus. Each of the mean scores is greater than the criterion mean of 3.00. These show that all the items reached the respondents’ consensus. The cluster mean for all the items in the data processing and analysis methods is 3.64 which is above the criterion mean of 3.00 indicating an overall appropriateness of the
cluster for inclusion in the MIS. The standard deviation values which ranged from .35 to .65 for items1-10 show that the opinions of the respondents are close to one another in relation to the mean. The standard deviation of item 1 which is 0.00 indicates that all the respondents agreed that the item is the most appropriate data processing and analysis method. The highly ranked data processing and analysis methods are utilizing software such as SPSS, OLAP and data mining (X=4.00,SD=0.00,Rank=1), processing data according to variables such as courses (X=3.97,SD= .48,Rank =2), arranging data/information differently for different target users such as students, researchers, lecturers, administrators and external bodies (X=3.87, SD=35,Rank=3), processing data according to variables such as ability levels (X=3.70,SD =47, Rank=4), using descriptive statistics such as mean, mode, median, percentages and standard deviation to summarize data (X=3.63,SD=.56,Rank=5), processing data according to Departments (X =3.63,SD =.56,Rank=5).

**Hypothesis**

There is no significant difference between the mean responses of the administrators and MIS experts on the data processing and analysis methods for MIS decision-making by administrators of South-East Nigerian universities.
Table 2: Results of t-test of the mean response of administrators and MIS experts on the data processing and analysis methods of the MIS.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Item</th>
<th>Administrators</th>
<th>MIS Experts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Utilizes software such as SPSS, OLAP and Data mining for data processing/analysis for decision making, such as gender.</td>
<td>4.00 .00</td>
<td>4.00 .00</td>
</tr>
<tr>
<td>2</td>
<td>Process data according to variables such as gender.</td>
<td>3.35 .49</td>
<td>3.60 .52</td>
</tr>
<tr>
<td>3</td>
<td>Process data according to variables such as ability level</td>
<td>3.75 .44</td>
<td>3.60 .52</td>
</tr>
<tr>
<td>4</td>
<td>Process data according to variables such as course.</td>
<td>3.95 .22</td>
<td>4.00 .00</td>
</tr>
<tr>
<td>5</td>
<td>Process data according to variables such as dept.</td>
<td>3.60 .60</td>
<td>3.70 .48</td>
</tr>
<tr>
<td>6</td>
<td>Process data according to variables such as faculty.</td>
<td>3.40 .60</td>
<td>.60 .52</td>
</tr>
<tr>
<td>7</td>
<td>Arrange data/information differently for different target users such as students, researchers, lecturers, administrators and external bodies.</td>
<td>3.85 .37</td>
<td>3.90 .32</td>
</tr>
<tr>
<td>8</td>
<td>Use inferential statistics such as chi test, t-test and f-test to test hypotheses.</td>
<td>3.45 .61</td>
<td>3.40 .52</td>
</tr>
<tr>
<td>9</td>
<td>Provide data inform of charts</td>
<td>3.30 .73</td>
<td>3.30 .48</td>
</tr>
<tr>
<td>10</td>
<td>Use descriptive statistics such as mean, mode, median, percentage and standard deviation to summarize data</td>
<td>3.70 .47</td>
<td>3.60 .70</td>
</tr>
<tr>
<td></td>
<td><strong>Cluster</strong></td>
<td><strong>3.63 .163</strong></td>
<td><strong>3.67 .16</strong></td>
</tr>
</tbody>
</table>

NS =Not Significant
N1 = administrators = 20,
N2 = MIS Experts = 10

Data on Table 2 shows the result of independent t-test conducted to compare administrators and MIS experts’ responses on the data processing and analysis methods of the MIS for decision-making. Items 2, 3, 4, 5, 6, 7, 8, 9 and 10 have 't' values of -1.296, .826, -.701, -.458, .901, -.368, .223, .000, .466, respectively. The cluster has 't' value of -.597. These values are not significant at p< 0.05. There is no significant difference between the mean scores of administrators and MIS experts on each of the items and the cluster.
The null hypothesis of no significant difference in the mean scores of administrators and MIS experts regarding the data processing and analysis methods of the MIS is not rejected. Therefore, the opinions of the administrators and the MIS experts regarding the data processing and analysis methods of the MIS are the same.

Discussion
The results of the study on data processing and analysis methods for MIS show a total of 10 items on data processing and analysis methods considered appropriate by the experts for inclusion in the MIS. These methods include: utilizing software such as SPSS; OLAP and data mining; processing data according to variables such as Courses, arranging data/information differently for different target users such as students, researchers, lecturers, administrators and external bodies; processing data according to variables such as ability levels, using descriptive statistics such as mean, mode, median, percentages and standard deviation to summarize data and processing data according to variables such as departments. The findings of the study agrees with that of Alter, (2013), who posits that the ISD methodology which specified that captured data in information systems like MIS should be processed and analyzed to be consistent with the objectives of the system and the utilization of data. The ISD stipulates that Information Systems like MIS should develop the required software needed to generate the data/information that meets the needs and desires of university administrators in decision-making process in the universities. The software in the MIS database should be able to process and analyze the captured data that meet the goals and objectives of the MIS and enhance data-based decision-making in the universities.

There is no significant difference between the opinions of administrators and MIS experts on the data processing and analysis methods for MIS for decision-making for administrators of South-East Nigerian universities. The agreement on data processing and analysis methods is an indication that the two groups; those who are the users of information and the MIS experts who are the providers do not differ on how to process the data collected.

Conclusion
The findings on data processing and analysis methods identified these methods: utilizing software such as SPSS, OLAP and data
mining for data processing and analysis for decision-making. These methods have implications for the MIS personnel to process and analyze the collected data using the identified methods and other variables for the target users. Utilizing the methods will make the university administrations possess the right data for the right decision-making process.

Recommendations
Based on the major findings of this study and the implications, the following recommendations were proffered:

1. The success of the MIS depends to a large extent on the availability of accurate, relevant and timely information for decision-making. It is recommended that the MIS personnel should use the identified data processing and analysis procedures in providing the relevant data for MIS activities in the universities;

2. The MIS personnel should use the data processing and analysis methods identified to process the captured data and transform them into information. This information should be used for administrative decision-making in the universities and

3. MIS units should organize workshops and seminars for the university administrators on how to process and analyze relevant data/information for MIS decision-making process in the university.

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IN-SCHOOL ADOLESCENTS’ PARENT-CHILD RELATIONSHIP AS PREDICTOR OF STUDENTS’ ACADEMIC ACHIEVEMENT IN SECONDARY SCHOOLS IN AWKA EDUCATION ZONE

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Abstract
The main purpose of this study was to determine how in-school adolescents' parent-child relationship predicts students' academic achievement. Specifically, the study determined how in-school adolescent parent-child relationship predicted students' academic achievement in Mathematics in secondary schools in Awka Education Zone. One research question and one null hypothesis guided the study. This research work is a co-relational study and was carried out in public secondary schools in Awka Education zone. The population of the study comprised of 11,266 secondary school students in the 18 public secondary schools in Awka South Local Government Area of Anambra State. The sample for the study consisted of 200 students. Ten schools were selected by simple random sampling. Twenty (20) students were selected from each of these schools using purposive sampling technique. A self-constructed instrument was used for data collection. The instrument was validated by experts and the reliability index determined using Cronbach alpha method. Data were collected by the researcher through direct hand-delivery process. Data collected were analyzed using range of scores to answer the research question while regression analysis was used to test the hypothesis at 0.05 level of significance. Findings indicated that parent-child relationship of the in-school adolescents predicted students’ achievements in Mathematics. Among others, it was recommended that parents should use warmth parent-child relationship than hostile parent-child relationship in handling their children especially as these children grow into adolescence.
Introduction
Academic achievement of students especially at the secondary school level is not only a pointer to the effectiveness or otherwise of a school but a major determinant of the future of adolescents in particular and the nation in general. The medium through which the attainment of individuals and the nation’s educational goals can be achieved is learning. Learning outcomes have become a phenomenon of interest to all and this accounts for the reason why scholars have been working hard to unravel factors that militate against good academic performance. One of such factors is in-school adolescence.

In-school adolescence is a transitional period among youth in schools. Accordingly, Aerneth (2015) noted that in-school adolescence refers to a youth who is in a transitional state of physical and psychological human developments that generally occur during the period of puberty to adulthood that are still in school system. This period is most closely associated with teenage years in secondary schools. In the same vein, Donald (2016) posited that adolescent as a teenager in the transitional human development that occurs from age thirteen to nineteen that are still schooling. In the context of this work, in-school adolescents comprise of adolescents that are still in school system and, they could be said to be mostly influenced by peer relationships in school. Although the significance of peer relationships grows during adolescence, parent-child relationship still maintains its importance for the psychological development of the child. The changes that go on within this period can influence students’ academic achievement or scholastic functioning.

Academic achievement of in-school adolescents has attracted attention of scholars, parents, policy-makers and planners. Adeyemo (2017) opined that the major goal of the school is to work towards attainment of academic excellence by students. According to the author, the school may have other peripheral objectives; emphasis is always placed on the achievement of sound scholarship. Besides, virtually everybody concerned with education places premium on academic achievement, excellent academic
achievement of children is often the expectation of parents (Eze, 2015).

Dinah (2014) opined that academic achievement are standardized test scores that efficiently measure the amount of knowledge or skills a person has acquired usually as a result of classroom instructions. Such test scores represent a statistical profile of the students which will be used for future comparison. These scores are generated from a psychometric test which measures what a person had already known and can do at the time of testing. These achievements are scores that provide educators with feedback regarding the extent the students have learnt and understood.

Students’ academic achievement represents students’ cumulative achievement. In academic context, they are school achievements that serve as regular performance feedback obtained by means of standardized test scores as represented by the approved examination board. They are also teacher assigned achievement scores that contain the most salient performance feedback derived from the test given to the students in the classroom.

According to Allison (2017), students’ academic achievement can help the teachers, parents and the significant others to ascertain the level of knowledge or ability acquired by the students through a standardized test or teacher made test. The scores provide clue to the extent a learner has learnt in a specific instruction. This reveals his/her areas of weakness and strength in a particular academic context. Also, the knowledge of a student’s weakness and strength which will be observed from the test scores will serve as feedback to the teachers on where extra work is needed.

At the outset of an activity, in-school adolescents differ in learning as a result of their prior experiences, personal qualities and social supports. The latter includes the extent that parents and teachers encourage them to learn, facilitate their access to resources necessary for learning, and teach them strategies that enhance skill acquisition and refinement. According to Bakari and Aisha (2017), parents’ academic aspirations for their children influence their children’s academic achievement both directly and indirectly.

In relating parent-child relationship with motivation and academic achievement therefore, parents’ intervention in a child’s
early education is consistently found to be positively associated with the child's academic achievement (Hill & Craft, 2015). Karriker-Jaffe, Foshee, Ennett, and Suchindran (2019) in their examination of mothers' interaction with their children on school issues showed that mothers' active involvement in children's home-work processes improve children's academic achievement. On the other hand, father's active management of learning environment is a positive prediction of students' academic competence. In effect, when parents monitor homework, encourage participation in extracurricular activities, are active in parent-teacher association (PTA) and help children develop plan for their future, children are more likely to do well in school. Parents who are actively involved in their children's education and provide stimulating learning environment at home can help their children develop feelings of competence, control, curiosity and positive attitude about academics, thus increasing their motivation in learning and academic achievement. According to Aronson, Raymond and Ferguson, (2013) various studies on parental involvement on child's education indicate that reading to children, interacting with children about what they read and celebrating moments of improved academic efforts are among the activities that promote motivation in learning and achievement. Many children have been hindered from reaching their optimum level in academic pursuit due to some negative factors that have arisen from home. These include lack of parental encouragement, lack of conducive home environment, poor finance and housing, poor feeding and ill-health (Akomolafe & Olorunfemi, 2011).

When certain factors are eminent in a child's life from home, it is clear that the child will be demotivated and driven towards poor academic achievements in school. Apparent situation on ground suggests that in-school adolescents have challenges achieving optimally because there seems to exist poor motivation among them to exert needed efforts to learn. It is against this background that the researcher is undertaking to determine empirically whether parent-child relationship at home predicts in-school adolescents' motivation in learning and academic achievement.

Since academic achievements are standardized test scores that efficiently measure the amount of knowledge or skills a person has acquired usually as a result of classroom instructions, the Mathematics scores of the students were used in this study. The
Mathematics scores represented the statistical profile of the students and were generated from a psychometric test which measured what the students had already known and could do in Mathematics at the time of testing. Thus, these Mathematics achievement scores provided feedbacks regarding the extent the students have learnt and understood.

**Purpose of the Study**
The main purpose of the study was to determine whether in-school adolescents’ parent-child relationships predict academic achievement of in-school adolescents. Specifically, the study determined the extent to which in-school adolescents’ parent-child relationship predicts the academic achievement of in-school adolescents in Mathematics.

**Research Question**
What are the Mathematics scores of the in-school adolescents?

**Null Hypothesis**
In-school adolescents’ parent-child relationships do not significantly predict in-school adolescents’ academic achievement in Mathematics

**Research Method**
This study determined how in-school adolescent’ parent-child relationship predicted students’ academic achievement in Mathematics. It was a correlational study carried out in public secondary schools in Awka Education Zone. The population of the study comprised of 11,266 secondary school students in the 18 public secondary schools in Awka South Local Government Area of Anambra State. The sample for this study consisted of 200 students. Ten schools were selected by simple random sampling. Twenty (20) students were selected from each of these schools using purposive sampling technique. A researcher-developed instrument was used for data collection. The instrument was validated by experts and the reliability index determined using Cronbach alpha method. Data were collected by the researcher through direct hand-delivery process. Data collected were analyzed using range of scores to answer the research question while regression analysis was used to test the hypothesis at 0.05 level of significance.
Presentation of Results

Research Question 1
What are the Mathematics scores of the in-school adolescents?

Table 1 Range of scores of the in-school adolescents in Mathematics

<table>
<thead>
<tr>
<th>Range of score</th>
<th>N</th>
<th>%</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.39</td>
<td>55</td>
<td>110</td>
<td>Very poor</td>
</tr>
<tr>
<td>40-49</td>
<td>31</td>
<td>46</td>
<td>Poor</td>
</tr>
<tr>
<td>50-59</td>
<td>53</td>
<td>106</td>
<td>Fair</td>
</tr>
<tr>
<td>60-69</td>
<td>24</td>
<td>48</td>
<td>Good</td>
</tr>
<tr>
<td>70-100</td>
<td>37</td>
<td>74</td>
<td>Very good</td>
</tr>
</tbody>
</table>

Table 1 indicates that with scores ranging from 70 to 100, 170 (18.9%) of the in-school adolescents have very good achievement in Mathematics while 147(16.3%) of the in-school adolescents who scored between 60 and 69 have good achievement in Mathematics.

Hypothesis: In-school adolescents’ parent-child relationships do not significantly predict in-school adolescents’ academic achievement in Mathematics.

Table 2: Regression Analysis on the In-School Adolescents’ Parent-Child Relationships as Predictor of Their Achievements in Mathematics

<table>
<thead>
<tr>
<th>Variable</th>
<th>R</th>
<th>R²</th>
<th>R² Change</th>
<th>% Variance</th>
<th>B</th>
<th>BET A</th>
<th>t-cal.</th>
<th>Df</th>
<th>P-value</th>
<th>Remks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent-child relationship</td>
<td>.059</td>
<td>.003</td>
<td>.002</td>
<td>0.2</td>
<td>-157</td>
<td>-0.59</td>
<td>-1.37</td>
<td>198</td>
<td>0.077</td>
<td>NS</td>
</tr>
</tbody>
</table>

In table 2, it was observed that parent-child relationship of the in-school adolescents had Beta of -0.059. This indicates that parent-child relationships of the in-school adolescents had contributed to -5.9 percent for their achievements in Mathematics.
Also, at 198 df and 0.05 level of significant, the calculated t 1.37 with P-value of
0.077 is not greater than the 0.05, indicating that the null hypothesis is rejected. Therefore, parent-child relationships of the in-school adolescents significantly predict their achievements in Mathematics.

**Discussion of Findings**

The result of the study shows that there is an influence of Parent-Child relationship on in-school adolescent’s academic achievement in Mathematics. Very few of the in-school adolescents (74%) have very good achievement in Mathematics, 48% have good achievement in mathematics, 106% have fair achievement in Mathematics, and 48% have poor achievement in Mathematics while 110% have very poor achievement in Mathematics. Therefore, Parent-Child Relationships significantly predicts in-school adolescent's achievement in Mathematics.

This finding is in tandem with the findings of Muola (2010) who reported that in-school adolescents’ motivation to do well in academic work is to some extent dependent on the nature of their home environment. Muola went further to buttress this point by saying that if there is warmth or hostile parent-child relationship at home, the child may or may not perform very well academically. Also, Rajitha (2015) reported that positive parental involvement influenced the academic achievement of their in-school adolescents. Equally, Igbo and Ihejiene (2014) reported that warmth parenting styles influenced in-school adolescent students' academic achievement.

**Conclusion**

The study established that in-school adolescents’ parent-child relationship was a good predictor of students’ academic achievement in Secondary Schools in the study area. Very few of the in-school adolescents (74%) have very good achievement in Mathematics while only 48% of the in-school adolescents have good achievement in Mathematics. Parent-child relationships of the in-school adolescents had contributed to -5.9 percent for their achievements in Mathematics. Parent-child relationships of the in-school adolescents significantly predict their achievements in Mathematics.
Recommendations
The following recommendations were made in light of the findings of the study:

1. Parents should employ more of warmth parent-child relationship than hostile parent-child relationship especially as their children grow into adolescence.

2. Government should introduce programmes that will educate parents on the need to adopt those interactions that will motivate their children to learn more in school in the course of their child upbringing and socialization.

3. Teachers should endeavour to eliminate Mathematics phobia in students. This could be achieved by convincing the students that Mathematics is a simple and friendly subject that they can pass.

4. Teachers should embark on orientation programme toward Mathematics in their respective schools. This will help students to be interested in Mathematics and also know what Mathematics is. They should not be allowed to grow with the mindset that Mathematics is a complex subject.

References


EFFECTS OF HEALTH LITERACY ON DISEASE PREVENTION AND HEALTH MAINTENANCE AMONG HIV /AIDS PATIENTS IN LAGOS STATE.

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Abstract
Access, comprehension and utilization of health information for disease prevention and health maintenance constitute concern worldwide. A cross sectional descriptive survey examined the effects of health literacy on disease prevention and health maintenance in Lagos State. Five hundred participants were selected through simple random sampling from 20,000 registered patients with Human immune deficiency virus (HIV)/Acquired Immune deficiency Syndrome (AIDS) clients of Nigerian Institute of Medical Research (NIMR) treatment Centre. Modified Standardized International Healthcare Questionnaire (IHQ) with r=0.88, validated by Ethical Committee of NIMR was adopted for data collection. The conflict cycle theoretical framework and Trans theoretical model of health behaviour change under-pinned study and variables studied were health instructions (health literacy), awareness of HIV/AIDS status, interpersonal relationship of People Living With HIV/AIDS (PLWHA), self esteem (shame), gender and utilization of health instruction; while data analysis applied Mean, Standard Deviation t-test, Critical r-estimation and ANOVA statistics to establish relationships among variables. Results showed that health instruction enhanced behaviour change with significant pattern of relationship between health awareness and client acceptance. Knowledge, acceptance of diagnosis and treatment varied in relation to perceived mode of disease transmission. Study concluded that health instruction (health literacy) enhanced
knowledge of infection and modes of transmission which in turn influenced interpersonal relationship and attitude of friends and family towards clients. The study recommended: health campaigns and people oriented programmes designed to include “teach back” methods, encouragement of participant’s questions in order to improve comprehension of health instruction and health behaviour in persons with low health literacy.

**Key words:** Health Literacy, Disease Prevention, Health Information, HIV/AIDS Patients.

**Introduction**

Literacy is the ability to read and write one’s own name and write coherently and think critically about the written word. The ability of individuals to share personal information such as health history, care of oneself, understand how to take medications, manage chronic disease conditions constitute literacy in health issues. Health literacy is the ability to receive, understand and utilize health information to make good decisions about personal health including medical care. Health literacy consist the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health.

According to World Health Organization (WHO, 2009), health literacy promotes empowerment, which in turn is vital for achieving the internationally agreed health and sustainable development goals as well as the emerging threats such as from the climate change, communicable and non-communicable diseases. However, studies by the World Health Organization (2009) observed that about one third of the adult population in the world has limited health literacy which can affect one’s ability to undertake actions such as: filling out complex forms, locating healthcare providers and services including management of medications for self and dependants.

Kickbusch, Wait and Maag (20) defined health literacy as the ability to make sound health decision(s) in the context of everyday life – at home, in the community, at the workplace, the healthcare centre, the market place and the political arena. It is a critical empowerment strategy to increase people’s control over their health, their ability to seek out information and their ability to take
responsibility as may be required in disease conditions including human immune deficiency virus acquired immune deficiency syndrome

Scholars observed that literacy has recently emerged as a key item on the research agenda in medicine and public health. Researchers and practitioners are grappling with evidence that the reading ability of the average adult falls well below the reading level of educational materials, directives, forms, and informed-consent documents commonly used in the health field. The threats to effective communication and efficacious care have spurred interest in exploring strategies for more effective communication. In addition, increased attention to literacy may be driven by legal concerns for adequate protection of human subjects and ethical concerns for patient autonomy in informed-consent procedures.

According to Rima, Barbara and Tayla (1999) some methodological strides applied since 1992, particularly in the form of new tools for rapid literacy measurement, have enabled a number of researchers to explore links between the literacy level of patients and health outcomes and its critical policy implications. However, these investigations should be undertaken through collaborative efforts between educators who understand the learning process and health professionals who understand the protocols used in health care and public health education.

Health maintenance focuses on disease prevention, health promotion and is a guiding principle in healthcare that emphasizes health promotion rather than management of symptoms of illness. It includes: counseling, health screening and preventive services designed to minimize risk of premature sickness or death and to ensure optimal physical, mental and emotional health throughout the natural life span. Health maintenance encompasses use of media to deliver health messages, advocacy for health policies to reduce risk for injury, exposure to toxins in water and workplaces and to ensure availability of recreational facilities.

Onwuama (2017) observed that health instruction comprise health information and programmes designed to increase health knowledge, create awareness concerning health issues with problem solving approach. It could be structured and delivered formally as lectures or built into activities of daily living to ensure learning occurs with subsequent behaviour change. Health instruction could be offered incidentally as the need arises for
corrective purposes, built into science based health related subjects such as biology or food and nutrition as correlated or presented and integrated into arts subjects such as English language when health related issues are discussed as in essay writing on 'personal hygiene, best food and kitchen safety'. Health instruction when provided appropriately, comprehended and applied to preserve health, prevent and control diseases or take positive decisions concerning one’s personal health and that of others constitute health literacy.

Onwuama (2017) identified benefits of health literacy to the individual to include: improved knowledge of risky exposures and available healthcare services, compliances to medications and other prescriptions, improved ability to interact effectively, act independently, get motivated and more self confident with improved self esteem while critical health literacy enables the individual to be resilient to economic and social problems. As a community member the individual with functional health literacy is useful resource especially for health education programmes. Onwuama confirmed that various conditions be it communicable or non-communicable disease require proper understanding of health instructions for disease prevention and self-maintenance in affected individuals with some chronic conditions requiring lifetime management such as the Human immune deficiency virus (HIV) infection.

President’s Emergency Plan for AIDS Relief (PREPFAR and Global AIDS, 2019) report on global HIV/AIDS epidemic confirmed that HIV, that cause AIDS has become one of the world’s public health challenges. However, there is a global commitment to stop new HIV infection and ensure that all persons living with HIV/AIDS (PLWHA) should have access to the antiretroviral treatment (ART). The HIV/AIDS review considered the HIV care continuum that comprise sequence or steps of care from diagnosis, receiving treatment until the viral load is suppressed to an undetectable level. Effort required to support PLWHA include link with medical care, start ART, strict adherence to treatment to achieve the goal of the United Nations AIDS (UNAIDS’s) programme: 90-90-90 goals targets that by 2020, 90% of all identified PLWHA would have known their HIV status, commenced ART to suppress viral load.

The National Agency for the Control of AIDS (NACA, 2014) reported projected HIV estimates for 2013 of about 3,229,757 while people living with HIV were estimated at 220,394 and number of
HIV/AIDS related deaths were 210,031. The report also indicated that a total of 1,476,741 required anti-retroviral drugs (ARV) while at risk mode of transmission were mother to child transmission, transfusion of infected blood and blood products where as heterosexual sex contributed to low risk spread of HIV among the population in Nigeria. PREPFAR and Global HIV (2019) reported an increase to 8 million in 2010 with projected increase rate of 1.6 million since 2017.

Krubiner, Faden, Cadigan, Gilbert, Henry, Little, et.al. (2016) reported that human immune deficiency virus (HIV) infection could be transmitted through unprotected sexual intercourse, mother to child intra uterine transmission, transfusion of unscreened infected blood, sharing of contaminated sharps including injection needles and other exposures to infected body fluids through abnormal social life styles and ignorance. HIV if left untreated leads to acquired immunodeficiency syndrome (AIDS) which is the final stage of HIV infection but not everyone who has HIV advances to this stage. AIDS occurs when the body immune system is badly damaged and the victim becomes vulnerable to opportunistic infections. When the number of CD4 cells falls below 200 cells per cubic millimetre of blood (200 cells/mm³), the condition is considered to have progressed to AIDS.

Krubiner, et al. (2016) explained that the CD4 count of an uninfected adult/adolescent who is in good health ranges from 500 cells/mm³ to 1,600 cells/mm³. Without treatment a case of AIDS can survive for about 3 years. However, with a dangerous opportunistic illness, life expectancy without treatment falls to about one year but people living with AIDS (PLWA) need medical treatment to prevent early death. The medicine used for HIV treatment is called anti-retroviral therapy or ART. If taken the right way, every day, can dramatically prolong the lives of many PLWA, keep them healthy and greatly lower their chance of transmitting the virus to others. Persons diagnosed with HIV, treated before the disease advances and remain on treatment can live nearly as long as someone who does not have HIV infection.

The National Policy on HIV/AIDS was developed in 2009 by the National Agency for the Control of AIDS (NACA) in agreement with key national and international framework and relevant to HIV/AIDS response in Nigeria. The policy provides regulations and guiding principles on topics ranging
from prevention of new infections and behavior change, treatment, care and support for infected and affected persons, institutional architecture and resourcing, advocacy, legal issues and human rights, monitoring and evaluation, research, knowledge management and policy implementation by the various stakeholders in the national response.

Various factors have been observed to hinder people from accepting and utilizing health information or health literacy especially among people living with HIV/AIDS disease. BBC News (2011) identified religion as a factor in provision of information, acceptance of HIV diagnosis. While Cohen, Wolf, Panter and Insko (2011) observed that 'guilt' is a learned behaviour consisting of self-directed blame or contempt, with shame occurring consequently to such behaviour making up a part of the overall experience of guilt. Kaufman (1992) observed that shame may carry the connotation of a response to something that is morally wrong whereas embarrassment is the response to something that is morally neutral but socially unacceptable. Simply put: A person who feels guilt is saying "I did something bad.", while someone who feels shame is saying "I am bad". Hence, it was confirmed that shame hinders the process of finding one's self while in the process of acceptance of HIV/AIDS diagnosis or effectively utilizing medical facilities and available infrastructure.

Various HIV/AIDS studies examined gender differences across many areas such as biological susceptibility, viral load, HIV related risk behaviours and their mediators, effectiveness of prevention interventions, access to prevention and care. Also these scholars examined some social factors including gender roles, gender norms, inequalities, substance abuse histories, experiences of sexual and physical abuse including their impact on the health of women and girls (Olayinka and Osho, 1997).

NACA (2014) identified key drivers of HIV Epidemics in Nigeria to include: entrenched gender inequality and inequities, chronic poverty, persistent HIV/AIDS stigmatization, poor quality of healthcare services and low perception of risks of multiple sex partners transmission of sexually transmitted infections. In addition, NACA reported gender considerations as contained in the NACA Act, Medium Term Strategy, National Economic Empowerment and Development Strategy (NEEDS) I and II, National Gender Policy, and the Seven Point Agenda of the Federal Government of Nigeria. Also,
gender dynamics profile of infections and the growing burden of 2.2 million HIV orphans in Nigeria enabled the revision policy to critically examine the rising HIV prevalence among women, increase in orphans and vulnerable children, stigmatization of PLWHA and violation of their rights as well as their roles and responsibilities and differences in communication messages on abstinence and condom use. NACA (2014) described the National HIV Prevention Strategy (2009-2013) as a guiding tool for planning, implementation, monitoring and evaluating and resource mobilization for HIV prevention interventions. The goal of the strategy is to reduce new HIV infections in order to further mitigate the burden and impact of HIV and AIDS in Nigeria.

Lagos is the most populous city in Nigeria and the second fastest growing city in Africa and the seventh in the world with an official population of 9,013,534 according to Nigerian census figures in 2006 and is currently estimated that 14,468,332 live in Lagos in 2020 while Lagos state estimates the population 17.5 million (worldpopulationreview.com, 2020). Lagos state has experienced a population explosion, untamed economic growth, rural migration with high standards of living when compared with other cities in Nigeria and is gradually becoming a major tourist destination which constitute exposure to Sexually Transmitted Infections (STIs) such as HIV/AIDS.

Statement of problem
HIV/AIDS is often associated with high level of socialization by members of the society especially in high density regions. HIV/AIDS related studies revealed that stigma has become a major problem in the provision of health care services for PLWHA in Africa (Cohen, Wolf, Panter & Insko, 2011). Also, there is an observed difficult identity problem in being HIV/AIDS positive while some scholars concluded that health literacy constitute a gap with low self-esteem and shame hindering the process of finding and helping one's self. Studies have shown that HIV would continue to be a leading cause of morbidity and mortality in many countries and population, including Nigeria as long as PLWHA remain victims of violation of fundamental rights at the work place, schools, communities/society on the basis of real or perceived status, particularly, through discrimination directed at People Living with HIV/AIDS. HIV poses a serious obstacle to the attainment of decent work and sustainable
development and its effects are concentrated among the most productive age group. In addition, shame and stigmatization has been seen as serious threat to provision of support for persons living with HIV/AIDS. Hence, this study

The following Hypotheses were tested in the study:

$H_01$: Availability of health instruction will have no significant positive influence on health behaviour/risk exposure of PLWHA;

$H_02$: Awareness of HIV/AIDs status will have no significant positive influence on health behaviour of PLWHA;

$H_03$: There is no significant difference in interpersonal relationship of PLWHA with family and friends due to knowledge of HIV status;

$H_04$: There is no significant difference in the self esteem (shame) of PLWHA due to health instruction/Literacy

$H_05$: Gender will not significantly influence utilization of health instruction/ Literacy by PLWHA

**Theoretical Framework**

The Theoretical framework and model used to explain this study are: Conflict cycle theoretical framework and The Trans-theoretical Model of Change;

The conflict cycle theoretical frame work was propounded by Wood and Long, (1991). The theory provided the platform for this study and implied that the individual experience of conflict moves through a series of positive or negative phases which when taken together makes up a self-perpetuating cycle. These cycles provide a mechanism for thinking about the ways in which conflict operates in our lives. One way of looking at crisis is to see it as the product of stress, kept alive by the reactions of others with feelings aroused by stress and behaviour that buffers against the painful feelings.
The Phases of Conflict Theory include:

**Phase 1.** Beliefs & Attitudes about Conflict - Conflict Occurs

**Phase 2.** Reinforces

**Phase 3.** RESPONSES — what we do when conflict occurs: pretend nothing is wrong? get angry? hit someone or take silent treatment? Agree to talk about it? or cry?

**Phase 4.** Consequences - Stress, Relief, Escalation, De-escalation, Resolution, Better or poorer relationship, Hurt feelings

The conflict cycle can be set in motion by some trivial events that trigger a torrent of thoughts and feelings often based on belief systems that may be some-what irrational. These feelings will be expressed in some observable behaviour. Persons that are unaware of the conflict cycle have the tendency to mirror the behavior of victims thereby causing the conflict to escalate. The initial diagnosis of HIV/AIDS produces agitation and anxiety followed by a denial stage. The victim gets into personal crisis of withdrawal, self-blame, guilt and pity. However, with appropriate health information the victim begins to heal psychologically and becomes empowered to
take positive decision to seek help and treatment from HIV/AIDS specialist and health care givers. Since HIV/AIDS has no cure, the victim is able to get medical care, eat adequate diet to regain a stable health status that would improve the CD4 count making the victim less infectious and socially acceptable. At this phase the HIV/AIDS patient would have achieved a positive behavior and can freely associate with people, released self from all hurtful feeling and is willing to maintain good health to the greatest possible limit.

Fig 2: The Trans-theoretical model of Change (Prochaska & Velicer, 1997)

The Trans-theoretical Model was promulgated by Prochaska and Velicer in 1997. The phases of change which include Pre-contemplation; Contemplation; Preparation to change; Action—adopting new habits and Maintenance of healthy behavior. The researchers therefore likened the PLWHAs the targets of this study as those in serious crisis and require intervention having exhibited varied responses to their personal experiences which include infection with deadly HIV/AIDS, being discriminated against, stigmatized and deprived of love and care. The educational health intervention (health literacy) that is expected to initiate behaviour change must be comprehended by victims to enable them practice
and achieve the expected health behavior considering shame as a serious barrier to effective health literacy and needs to overcome the hurtful feeling.

**Methodology**

The study focused on persons living with HIV/AIDS currently undergoing treatment in Lagos. A cross sectional descriptive survey research method was adopted to investigate the availability and application of health information and literacy for disease prevention and its impact on self esteem among People Living with HIV/AIDS (PLWHA). The population comprised 20,000 patients diagnosed of HIV/AIDS currently receiving treatment at National Institute for Medical Research (NIMR) Yaba. Having obtained permission from the Ethical Committee of the National Institute for Medical Research (NIMR), The researchers proceeded to select five hundred participants as study sample through simple random sampling technique and drawn from existing patients at NIMR, Yaba Lagos using Krejcie and Morgan (1970) sample size determination format \( S = \frac{X^2NP(1-P)}{d^2(N-1)+X^2P(1-P)}. \)

About 20,000 PLWA attended the NIMR clinic within six months during which the participants were selected. The simple random sampling technique was applied with replacement by assigning numbers 1 to 10 and selecting all odd numbers such that 5 participants PLWA were selected from each set based on availability at HIV/AIDS clinics. Persons who declined participation were replaced. Data collection was executed with Modified Standardized International Healthcare Questionnaire (IHQ) Picker (2009), and interview questionnaire tagged "SWBQ". The content and face validity of the instrument was carried out by the Ethical Committee of Nigerian Institute of Medical Research (NIMR)Yaba and experts in the field of statistics, measurement and evaluation in the faculty of Education of the University of Lagos. The SWBQ had a reliability value \( r_{\infty} = 0.88. \)

Four trained Research Assistants assisted during questionnaire administration. An Health instruction Module to provide extra health information was structured and validated for use during 3weeks Health teaching intervention. The content of the module (i) emphasized knowledge of causes of HIV/AIDS including disease process and modes of HIV infection, (ii) methods of transmission of infection to other people, disease prevention
techniques and (iii) healthy sexual behaviours. The module provided information on people at Risk: drug addicts, pregnant mothers, babies, rape cases etc. It emphasized the role of functional literacy in health. Also, on the relationship between knowledge of one’s HIV status and health behavior and on the benefits of health information on individual to either healthy or unhealthy behaviour.

Data analysis employed the inferential statistics of t-test, Analysis of variance (ANOVA) and Pearson’s Product Moment Correlation Coefficient established the contributions and relationships between variables studied and all hypotheses were tested at 0.05 alpha level.

Results

Fig 3: Gender Distribution Graph

Figure 3: presents some of the biographic information of the respondents surveyed. The data show that distribution on gender favours female group with 72.7% of the total sample size leaving male participants with only 27.3%. The disparity in the figure could be as a result of compulsory HIV/AIDS screening for pregnant women in health centres across the Nation.

Hypothesis 1: Availability of health instruction will have no significant positive relationship on health behavior/risk exposure of PLWHA

In order to test for the relationship, Pearson Product Moment correlation statistical tool was used and the result is presented in table 1.
Table 1: **Result on Availability of health instruction on health behaviour/risk exposure of PLWHA**

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>r-cal</th>
<th>r-crit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of Health instruction</td>
<td>500</td>
<td>50.1</td>
<td>9.7</td>
<td></td>
<td>0.87</td>
<td>0.195</td>
</tr>
<tr>
<td>Health Behaviours</td>
<td>500</td>
<td>53.6</td>
<td>8.92</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

P< 0.05, df=498

Based on the table 1 presented, the mean value of health instruction (M=50.1, SD=9.7) was less than the mean value of Health behaviour (M=53.67, SD=8.92). Since, r-calculated (r-cal = 0.87) is significantly greater than the r-critical (r-crit=0.195) given 498 degree of freedom at 0.05 level of significance, the null hypothesis which states that there will be no significant positive significant relationship of availability of health instruction on health behaviour/risk exposure of PLWHA was rejected while the alternative hypothesis was accepted. This result implies that there is a relationship between availability of health instruction on HIV/AIDS and the health behaviour of people living with HIV/AIDS

**Hypothesis 2**

Awareness of HIV/AIDS status will have no significant positive relationship on the health behaviour of PLWHA

To test the relationship between the two variables Pearson Product Moment correlation was used and the result is presented in Table 2
Table 2: Awareness of HIV/AIDS status and health behaviour of PLWHA.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>r-cal</th>
<th>r-crit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness of HIV/AIDS status</td>
<td>500</td>
<td>47.9</td>
<td>6.2</td>
<td></td>
<td>498</td>
<td>0.57</td>
</tr>
<tr>
<td>Health Behaviours</td>
<td>500</td>
<td>53.67</td>
<td>8.92</td>
<td></td>
<td></td>
<td>0.195</td>
</tr>
</tbody>
</table>

Based on the table 2 presented the mean value of Awareness on HIV/AIDS (M=47.9, SD=6.2) was less than the mean value of Health behaviour (M=53.67, SD=8.92). Since, r-calculated (r-cal = 0.57) is significantly greater than the r-critical (r-crit=0.195) given 498 degree of freedom at 0.05 level of significance, the null hypothesis that stated that there will be no significant positive relationship of awareness of HIV/AIDS on the health behaviour of people living with HIV/AIDS was rejected while the alternative hypothesis was accepted. This indicates that the level of awareness of HIV/AIDS patients about HIV/AIDS plays a significant role on their health behaviour.

**Hypothesis 3:**
There will be no significant difference in inter-personal relationship of PLWHA with family and friends due to their knowledge of HIV status. In order to test for hypothesis 3 a t-test analysis of variance was applied.

Table 3: Interpersonal relationship with family/friends of PLWHA

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t-cal</th>
<th>t-crit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Interpersonal Relationship With friends/family</td>
<td>136</td>
<td>12.48</td>
<td>5.26</td>
<td>498</td>
<td>3.82</td>
<td>1.96</td>
</tr>
<tr>
<td>Negative Interpersonal Relationship With family</td>
<td>364</td>
<td>11.8</td>
<td>2.62</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at P<0.05
Table 3 presents a t-test analysis of Knowledge of HIV status of PLWHA and their interpersonal relationship with family/friends. Based on results on Table 3, positive interpersonal relationship ($M=12.48$, $SD=5.26$) is slightly more than the mean value of negative interpersonal relationship ($M=11.8$, $SD=2.6$). Since, $t$-calculated ($t_{cal}=3.82$) is significantly greater than the $t$-critical ($t_{crit}=1.96$) given 498 degree of freedom at 0.05 level of significance, the null hypothesis that states that knowledge of HIV/AIDS status of participants will not significantly influence their interpersonal relationship with family/friends was rejected while the alternative hypothesis was accepted. In order word, one’s knowledge about his HIV/AIDS status to a great extent influences her interpersonal relationship with friends and family members.

**Hypothesis 4:** There is no significant difference in self-esteem (shame) of PLWHA due to health instructions/ Literacy. In order to test for hypothesis 4 analysis of variance (ANOVA) was applied.

**Table 4:** Difference in Self Esteem of PLWHA due to Health Inst/literacy

<table>
<thead>
<tr>
<th>Summary</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>7.496</td>
<td>1</td>
<td>7.496</td>
<td>.610</td>
<td>435</td>
</tr>
<tr>
<td>Within Groups</td>
<td>6117.312</td>
<td>498</td>
<td>12.284</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6124.808</td>
<td>499</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant $p<0.05$, $f_{crit}=2.86$ & df (1, 498)

Table 4 presents the $f$-calculated values ($f_{cal}=0.610$) is significantly less than the $F$-critical ($f_{crit}=2.86$) with 498 degree of freedom at 0.05 level of significance. The null hypothesis which stated that there is no significant difference in the self-esteem of PLWHA due to health instructions /literacy was accepted while the alternative hypothesis was rejected, indicating that the availability of health instruction would not influence the self-esteem of PLWHA in Lagos, Nigeria.
Hypothesis 5
There will be no significant gender difference in the utilization of health instruction by PLWHA. The t-test analysis of variance was applied to test hypothesis 5.

Table 5: Gender difference in the utilization of health information by PLWHA

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>df</th>
<th>t-cal</th>
<th>t-crit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>133</td>
<td>12.48</td>
<td>6.26</td>
<td>497</td>
<td>3.02</td>
<td>1.96</td>
</tr>
<tr>
<td>Female</td>
<td>346</td>
<td>18.9</td>
<td>2.03</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

P< 0.05

Table 5 presents a t-test analysis on gender difference on utilization of Health information by PLWHA and revealed that the mean values for male (M=12.48, SD=6.26) is less than the mean value of female (M=18.9, SD=2.03). While the t-calculated value (t-cal =3.02) is significantly greater than the t-critical (t-crit=1.96) given 497 degree of freedom at 0.05 level of significance, the null hypothesis that states that there will be no significant gender difference in the utilization of health information was rejected while the alternative hypothesis was accepted. In other words, there is a significant effect of gender on utilization of health instruction by PLWHA.

Discussions
The study showed a significant influence of availability of health instruction on health behaviour of PLWHA. This finding is in line with Kalichman, Wenherd, Bemotsch, and Chery (2003) who maintained that beyond the availability of health instructions and information, medical patients can still be consumers of false information and instruction which often time influence their health behaviour. It was also supported by Rudd, Moeykens and Colton (1999) that many patients cannot understand basic healthcare information due to poor health instruction strategies. Low health literacy reduces the success of treatment and increases the risk of medical error. Lansky (2010) asserted that proper understanding, utilisation and implementation of health information would help
achieve the set goals that include: reducing new infection, increased access to care to improve health outcomes of PLWHA, reduce HIV related health disparities and achieve coordinated national response to HIV epidemic.

In Nigeria, available evidence shows that the government has put in place machineries such as National Action Committee on AIDS (NACA), States Action Committee on AIDS (SACA) coupled with the efforts of the United Nations through its agencies such as World Health Organization (WHO), United Nations Development Programme (UNDP) and UNICEF and other collaborators such as World Bank and United States of America. In addition some concerned Non-Governmental Organizations (NGOs), individuals and corporate bodies have geared efforts towards providing: funds to fight the disease, information on HIV/AIDS situations, awareness programmes on the reality of HIV/AIDS, ameliorating drugs for those living with AIDS (PLWHA), counseling services, organizing workshops and training for HIV/AIDS workers and care providers. These collaborative efforts suggest that all hands are on deck to find a lasting solution (NPP, 2014-2015). However, PLWHA must understand the information to utilize these facilities.

Also, various interventions, such as simplified information and illustrations, "teach back" methods and encouraging patient's questions, have improved health behaviors in persons with low health literacy. The study corroborated the findings of WHO (2013) blamed poor health behaviour of medical patients on the misleading health instructions from most Nigerian Health institutions. Judging whether instruction is applicable and credible therefore presents challenges far greater than those posed by merely searching for the instructions hence; victims must watch the quality, authoritativeness and provenance of instruction/information. Beyond availability of health information and instruction, HIV/AIDS programmes require building intervention instruction consumer skills.

Otinwa (2008) observed that wellness is an interactive process of becoming aware of and practising, healthy choices to create a more successful, balanced and harmonious lifestyle. It implies taking responsibility to reduce health risks and maximizing healthy choices as related to personal habits and interest of eating, resting, recreating and socialising. Wellness is a mindset, a predisposition to adopt a series of key principles in various areas of
life that lead to high levels of well-being and life satisfaction. PLWA are expected to embrace positive attitude towards their personal health.

Hypothesis two revealed a significant relationship between awareness of health status and health behaviour. This result indicated that PLWHA are more conscious of their health as result of their status. What one knows to a great extent affects one's behaviour towards such issues as confirmed by Rima, Barbara and Tayla (1999) that examined the role of functional literacy in health. Also, in relation to knowledge of one's HIV status and health behaviour, health information predisposes an individual to either healthy or unhealthy behaviour. Schillinger, Grumbach, Piette, Wang, Osmond, Daher, Palacio, Sullivan, Bindman (2002& 2006) and Likoye (2004) had earlier in their studies observed that people who had less knowledge of their health promoting behavior, face considerable obstacles to health services, and experience poor communication with medical professionals. Simich (2009) affirmed the independent relationship between literacy and knowledge on management of non communicable diseases such as diabetes mellitus and glucose control considering the demand of chronic diseases and self-management.

NACA (2014) reported that the National HIV/AIDS prevention plan (2014-2015) stated that Nigeria accounts for about a third of the global burden of children born with HIV. While the National HIV Policy (2009) recognised prevention as a critical strategy for halting new HIV infections in Nigeria and proclaimed that 'Prevention remains the most important strategy as well as the most feasible approach for reversing the HIV epidemic since there are no vaccines, nor medical cure for HIV. The Ministry of Health & Social services in the National Strategic Framework for HIV/AIDS (NSF, 2017) set priorities and interventions to prevent and reduce infections. The PLWHA are required to key into the provision of health promotion strategies for disease prevention and control for healthy living.

The United States of America’s national HIV/AIDS Strategy by President Obama updated to 20:20 which confirmed the relevant health information that should be provided to manage PLWA to include finding care, prevention strategies, knowledge of HIV/AIDS Status, CD4 Count and Viral load which are expected to help the patients and their families (Lansky, 2010). Krubiner, et.
al., (2016) asserted that unlike some other viruses, the human body cannot get rid of HIV completely making HIV infection a lifetime condition. There is no effective cure for HIV currently but with proper treatment and medical care, HIV can be controlled.

Also, the finding shows a significant difference in interpersonal relationship of PLWHA with family and friends due to knowledge of HIV status. KEBA Africa (2011) admitted that family system in Ghana and in most African countries enhances the breeding of stigmatization to HIV/AIDS to some extent. According to the author, family members are considered actively responsible for the behaviours of each household members and the family blame or praises for behaviours of its members. A family member who dies or lives with HIV/AIDS is stigmatized because of the mindset of the community as a whole. They may encourage relatives with HIV/AIDS to remain silent about their status to prevent gossip, social rejection and HIV related stigma. In some cases family members isolate relatives with HIV to minimize social contact.

Finding also showed that there was no significant difference in the self-esteem of PLWA due to instruction. Low self-esteem (shame) of most PLWA could be associated with stigmatization that goes with HIV. This findings is supported by Krubiner, et al. (2016) who earlier observed that almost everyone living with HIV at some point have a feeling of self-hatred, guilt and shame that can be expressed as depression and despair which often lead to withdrawal from family and social life. The finding is also supported by Fossum, Mason and Maryln (1986) who believe that shame and depression or withdrawal could prevent an individual from positive health behaviours or even self-support.

The findings from hypothesis five revealed that there is a significant gender difference in the utilization of health instruction by PLWHA. This finding is supported by Olayinka and Osho (1997) who in a gender and HIV/AIDS study demonstrated gender differences across many areas of HIV research including biological susceptibility, viral load, HIV related risk behaviours and their mediators, effectiveness of prevention interventions, access to prevention and care, and engagement in research studies. In addition to biological differences, a variety of social contextual factors including gender roles, gender norms, inequalities, substance abuse histories, experiences of sexual and physical abuse, and access to resources were seen to have impact on health outcomes for
women. Thus women were observed to have visited healthcare facilities more often possibly because of various conditions such as pregnancy, lactation and issues related with consciousness and the need to reduce mother to child transmission of HIV/AIDS. Gender specific interventions may be required for some sub-populations of highly vulnerable group; at minimal, gender analysis of risk factors and intervention effects are necessary.

**Conclusion:**
This study confirmed that health instruction is capable of influencing health behaviour positively and minimizing risk exposures among HIV/AIDS patients. Also, awareness of individual health status or knowledge of HIV/AIDS status produces positive significant influence on health behaviour of PLWHA. However, availability of health information and instruction does not seem to influence guilt feelings and feelings of low self-esteem (shame) among PLWHA.

**Recommendations**
The study recommends Health Awareness campaign designed and carry out behavioural changing programme in mother tongues to enable both PLWHAs and uninfected persons to understand expected actions and safety precaution capable of protecting self, family members and significant others at all times. A multi-disciplinary approach is required to effectively educate PLWHA that shame needs to be expunged from individual memories and appropriate health behaviour imbibed to enable individual recover and assume responsibility in the society.

There is need for awareness campaign against guilt versus shame feelings targeted at youth and society to de-emphasize stigma in order to encourage positive interactions between the seemingly uninfected persons and PLWHA.

Programmes should be mounted in schools and market places or community centres to reach people using posters, handbills and public campaigns.

There is the need to design programmes to enlighten and involve the males on the need to know their HIV status. This can be enforced during marriage counselling sessions or during anti-natal procedures before child birth.
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EFFECTS OF MIND MAPPING STRATEGY AND GENDER ON STUDENTS’ BASIC SCIENCE ACHIEVEMENT IN ELEME LOCAL GOVERNMENT AREA OF RIVERS STATE, NIGERIA

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Abstract
This study investigated the effect of mind mapping strategy on students’ achievement in Basic Science in Eleme Local Government Area of Rivers state. It also found the moderating effect of gender on students’ Basic Science achievement within the experimental setting. The study adopted a non-equivalent quasi-experimental design involving the pretest, posttest and a control group. Intact classes comprising 212 Junior Secondary School students from Onne town in Eleme Local Government Area of Rivers State were purposively selected for the study. Two instruments: Mind Mapping Instructional Lesson Plan and Basic Science Achievement Test ($r=0.83$) were developed and used for the study which lasted 8 weeks. Descriptive statistics and Analysis of Covariance were employed in analyzing data. The findings of the study indicated that a significant effect of mind map strategy on students’ Basic Science achievement resulted ($F_{(1,211)} = 32.38$, $P<.05$, $\eta^2 = 0.14$) with the experimental group performing better ($\bar{x}=72.33$) than the control ($\bar{x}=62.78$). The moderating effect of gender on the dependent variable was not significant but it interacted with instructional mode to produce significant effect on the dependent measure ($F_{(1,211)} = 9.88$; $p<.05$; $\eta^2 =.05$). Mind mapping strategy improved students’ achievement in Basic Science and was particularly helpful in encouraging female students. The study recommended that teachers’ capacity should be built for adoption of Mind Mapping.
strategy for stimulation of students' science learning and enhanced performance in Basic Science.

**Keywords:** Mind-Mapping, Achievement in Basic Science, Junior Secondary School Students, Gender

**Introduction**

Improving science curricula activities in Nigerians schools have been advocated by several authors (Akinsola & Ogunleye, 2003; Ogunleye, 2007; Ogunleye, 2019). These calls arose from persistent incidents of poor performance of students in Chemistry, Biology, Physics and Basic Science, without which the background knowledge of science cannot be effectively provided as a foundation for further studies in science. One of the critical factors that impinge on learning, and by extension, achievement is teaching strategy. Researchers have conducted several studies on the contributions of different teaching strategies to learning outcomes (Davies, 2011; Dhindsa & Anderson, 2011; Fuad, Zubaidah, Mahanal & Suarasini, 2017; Madu & Metu, 2010; Ogunleye, 2010; Ojebiyi & Salako, 2013). One significant finding of these studies seems to indicate that instructional design have a significant impact on students. In addition, experimenting with more innovative strategies will open new frontiers of knowledge and skills for improvement in science classroom activities (Ogunlela & Ogunleye, 2014).

This is not surprising as the type and manner of implementing the teaching strategy goes a long way in determining the level of participation and assimilation of instructional content by the learner. In view of these, there have been renewed interests in the use of graphics-included teaching strategies to enhance the teaching and learning process. According to Rajapriya and Kumar (2017), visual learning encompasses such ideas as concept maps, mind maps and tree diagrams which basically makes use of diagrams and have been proven overtime to be an efficient teaching method. This is because these visual learning strategies present key information in graphical format thereby allowing for faster and concrete internalization of knowledge by the learner in describing mind map.

According to Akinoglu and Yasar (2007), there is widespread agreement that the adoption and proper utilization of mind maps during instruction facilitates meaningful learning. This is based on
the premise that visual stimulation (in terms of pictures, graphics items, and colors) excites the visual-spatial sketchpad in the memory, therefore enhances student's interest to understand new knowledge through the association of visual stimuli to spoken words. Mind maps presents a comprehensive articulations of visual presentations by combining the attributes of color, sketch and objects to assist the learner to conceptualize ideas and understand abstract contents, while at the same time promotes learning achievements.

Further, Buzan and Buzan (2015) avers that mind maps encompass a picture presentation in a central image, where the major themes radiate from the central images as branches with a key word or image printed on an associated line of the branches. The use of the connected nodes creates a structure that is endless and it keeps generating ideas and sub-ideas, often with the use of visual elements (including colors, images, words and numbers). Mind maps basically involves the use of visual presentation where the topic or major concept is at the centre of the page, while the main ideas are placed around it in a radial form with connector lines. Each of these ideas has sub-ideas that are also linked to the ideas.

The rationale for such is to move ideas from the general to the specific. It involves a deconstruction of concepts at each stage, while maintaining their connection to their subordinates. This activity is carried out with diagrams, patterns, and colors in order to create a vivid and memorable impression in the mind. Aykai (2004) argues that the use of mind maps during instruction facilitates greater understanding among the learners by enhancing their analytical and memory skills thereby ensuring retention and learning. Using mind maps also helps teachers vary their teaching methods which may be more likely to reach diverse learners (Nesbit &Adesope, 2006). It makes the teaching-learning activities more stimulating for the teacher as well the student and enables effective knowledge construction and sharing (Epppler, 2006) and enhances creative thinking skills (Yoon & Kang, 2015).

It has become very critical that effective teaching strategy should be deployed by teachers in their teaching activities in order to enhance the learning outcomes of their students. It is in view of this expectation that this study attempted to determine the effect of
mind mapping strategy on the achievement of Basic Science students.

**Purpose of the Study**

The broad aim of the study was to determine the effect of mind mapping instructional strategy on students’ achievement in Basic Science. Specifically, the study intended to:

1. Isolate the effect of Mind Mapping strategy on students’ achievement in Basic Science.
2. Ascertain the influence of gender on the effect of Mind Mapping strategy on students achievement in Basic Science.

**Hypotheses**

The following research hypotheses were tested at .05 level of significance:

1. There is no significant difference between the mean achievement scores of students taught Basic Science with Mind Mapping strategy and those taught with the conventional lecture method.
2. There is no significant difference between the mean achievement scores of male and female students when taught Basic Science with Mind Mapping strategy and the conventional lecture method.
3. There is no significant interaction effect of treatment and gender on students’ achievement in Basic Science.

**Materials and Method**

The study adopted a non-equivalent quasi-experimental design involving the pretest, posttest and a control group (Akinsola & Ogunleye, 2004). 212 Junior Secondary School Students (JSS) (102 males and 110 females) from four schools in Onne town in Eleme Local Government Area of Rivers State, Nigeria, were purposively included in the study. The schools are co-educational public secondary schools and one intact class of Basic Science students were selected per school. Two intact classes were randomly assigned to treatment and two to control group. Self-developed instruments were employed for data collection. They are: "Basic Science Achievement Test" (BSAT) used to assess both the pretest and posttest achievement for both treatment and control groups. Using Scorbat computer programme, the test was validated both for reliability and difficulty index via the Kuder-Richardson formular-
The reliability of the instrument was established to be \( r = 0.83 \) while the total-item difficulty was 0.52. The BSAT comprised of two sections A and B which contain the demographic data of the students and the multiple-choice objective test items respectively. The BSAT contains 25-items drawn from the 2019/2020 Basic Science JSS 3 curriculum with 5 options. The topic taught was 'Sense Organs'. The researcher trained teachers appointed to serve as research assistants on Mind Mapping techniques while others were trained to handle the conventional lecture method. The study period lasted 6 weeks. The data collected were analyzed using descriptive statistics and ANCOVA using the pretest scores as covariates.

**Results and Discussion**

**Hypothesis 1:** There is no significant difference between the mean achievement scores of students taught Basic Science with Mind Mapping strategy and those taught with the conventional lecture method.

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
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<td>4</td>
<td>5065.99</td>
<td>58.91</td>
<td>.00</td>
<td>.53</td>
</tr>
<tr>
<td>Intercept</td>
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<td>1</td>
<td>29998.59</td>
<td>348.84</td>
<td>.00</td>
<td>.63</td>
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<tr>
<td>Pretest</td>
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<td>14515.03</td>
<td>168.79</td>
<td>.00</td>
<td>.45</td>
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<td>1</td>
<td>124.66</td>
<td>1.45</td>
<td>.23</td>
<td>.01</td>
</tr>
<tr>
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<td>1</td>
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<td>.00*</td>
<td>.14</td>
</tr>
<tr>
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<td>849.20</td>
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<td>.00*</td>
<td>.05</td>
</tr>
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<td>85.99</td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>1010752.00</td>
<td>212</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Corrected Total</td>
<td>38065.21</td>
<td>211</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Corrected Total = 38065.21

Table 1 shows that the effect of treatment on students' achievement in Basic Science is significant \((F_{(1, 211)}=32.38; p<.05; \eta^2 = 0.14)\). This
shows that there exists a significant difference between the achievement scores of the experimental group and the control group. On the basis of this finding, the null hypothesis 1 is rejected.

**Table 2: Estimated Marginal Means of Treatment and Control Groups**

<table>
<thead>
<tr>
<th>Dependent Variable:</th>
<th>Posttest</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>class(2 stream)</td>
<td>Mean</td>
<td>Std. Error</td>
</tr>
<tr>
<td>Treatment</td>
<td>72.33</td>
<td>.89</td>
</tr>
<tr>
<td>Control</td>
<td>62.78</td>
<td>.92</td>
</tr>
</tbody>
</table>

Table 2 shows that the treatment group obtained a mean score of 72.33 (Std. Dev. = 12.77) which is higher than the mean score of the control group which is 62.78 (Std. Dev. = 12.38). This indicates that the treatment group scored higher than the control group in the adjusted posttest hence the mind mapping instruction was more effective than the conventional lecture method.

**Hypothesis 2:** There is no significant difference between the mean achievement scores of male and female students when taught Basic Science with Mind Mapping strategy and the conventional lecture method.

From Table 1, the effect of gender on students’ achievement in Basic Science is not significant ($F_{(1, 211)}=1.45; p>.05; \eta^2 = 0.01$). This means that the male and female achievement scores are comparable, hence, the null hypothesis 2 is not rejected.
Table 3: Estimated Marginal Means of Male and Female students  
Dependent Variable: posttest

<table>
<thead>
<tr>
<th>Gender</th>
<th>Mean</th>
<th>Std. Error</th>
<th>95% Confidence Interval</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>73.42</td>
<td>1.38</td>
<td>70.69</td>
<td>73.42</td>
<td>76.15</td>
</tr>
<tr>
<td>Female</td>
<td>71.31</td>
<td>1.33</td>
<td>68.68</td>
<td>71.31</td>
<td>73.94</td>
</tr>
</tbody>
</table>

Table 3 shows that the males obtained slightly higher mean score of 73.42 (std. Dev.=1.38) in Basic Science Achievement than their female counterparts who scored 71.31 (std. dev.=1.33).

Hypothesis 3: There is no significant interaction effect of treatment and gender on students’ achievement in Basic Science. From Table 1, it was obtained that the interaction effect of treatment and gender on students’ achievement in Basic Science is significant ($F_{(1, 211)}=9.88; p<.05; \eta^2 = 0.05$). This means that a particular gender group was favoured by a particular treatment group. The null hypothesis is rejected and the line graph in Figure I presents the nature of the significant interaction effect.

Figure I: Line Graph Showing Interaction of Treatment and Gender on Achievement
Figure I shows that female students consistently performed better than their male counterparts both in the experimental group and the control group. This implies that the interaction is ordinal.

**Discussion**
This study shows evidence that the use of mind maps to teach Basic Science content have significant effect on the academic achievement of the students. The finding of the study indicated significant difference between the mean achievement scores of those taught using mind mapping teaching strategy and those taught using conventional lecture methods. There were higher achievement scores among the mind map groups compared to the lecture method group. This is in agreement with the findings of Adodo (2013), Duyilemi and Babafemi (2019), Akbar and Taql (2017), Wilson et al. (2016) and Jain (2015).

Several reasons have been adduced to be responsible for the increase in academic performance among the students exposed to mind mapping teaching strategy compared to those taught with conventional lecture method. One of the critical mind mapping strategy involves the incorporation of imagery, visual-spatial arrangement and color in the teaching and learning process. These activities enhance the retention and recall process in the brain in the mind map group more than those in the conventional lecture method group.

Also, mind mapping teaching strategy generates more curiosity, interest and enthusiasm among the students than the conventional lecture method that encourages note-taking and rote learning. The emphasis on student-centered participator teaching and learning style ensures that the students are at the center of the process, thereby encouraging greater student involvement (Gagić et al., 2019), facilitate the understanding of challenging concepts (Abbas et al., 2018), and enhance motivation (Jones et al., 2012).

**Recommendations**
Based on the findings of the study, the following recommendations are made:

- Teachers should ensure diversification of teaching methods during the teaching and learning process, especially those strategies that are more participatory and student centered.
This is to ensure that the students are active participants in the process.

- There should be a programme where teachers are encouraged to upgrade their pedagogical skills through retraining to acquire more effective teaching strategies other than the conventional teaching method.

Conclusion
The study evaluated the effect of mind mapping strategy on student’s achievement in Basic Science. Based on the findings of the study, it is hereby concluded that:

- The mind mapping teaching strategy does have significant effect on the achievement of the students.
- There is no significant effect of mind mapping teaching strategy on the achievement of basic science students based on gender.

References


ASSESSMENT OF TEACHERS AND STUDENTS’ PERCEPTION OF THE NEED FOR CIVIC EDUCATION IN SECONDARY SCHOOLS IN OSUN STATE

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Abstract
The study examined teachers and students perceived needs for Civic Education in secondary schools in Osun State. It also investigated the extent to which the aims and objectives of the introduction of Civic Education in secondary schools is being achieved and examined the teachers and students perceived factors confronting teaching and learning of Civic Education in the study area and finally determined the difference in the teachers and students perception of the needs for Civic Education in secondary schools in Osun State. The study adopted survey research design. The study population comprised students and teachers of Civic Education senior secondary schools in Osun State. Multistage sampling procedure was employed to select the sample size which consisted of 600 students and 60 teachers. Three research instruments were used to elicit information from the respondents and the instruments were validated with reliability index of 0.76, 0.81, and 0.78 respectively. The research questions were analysed using simple percentages, mean, standard deviation and relative significance index while the hypothesis was analysed using t-test statistics. The results showed no significant difference in teachers and students perception of the needs for Civic Education in secondary schools in Osun State (t = -1.356 p > 0.05). The study concluded that both teachers and students were of the opinion that aims and objectives of Civic Education were
achieved at high extent in senior secondary schools in Osun State, Nigeria.

Keywords: Civic Education, Assessment, Perception, Needs, Teachers, Students.

Introduction
Civic Education is a series of training and activities aimed at making young people and adults better equipped to participate actively in democratic life by assuming and exercising their rights and responsibilities in the society (Birzea, Harrison, Krek & Spajicurkas, 2005). Civic Education strengthens the society by providing information to and endowing them with skills required to be a good citizen and participate in political activities. In the opinion of Adeyemi and Falade (2015), Civic Education is concerned with the development of values, social norms, skills and democratic ideals. Civic Education is also known as citizen education or democracy education and it can be targeted at children and adults, in developed or developing countries.

According to Nigerian Educational Research and Development Council, NERDC (2007), the overall objectives of Civic Education at the basic level of education (Primary 1 - JSS 3) and Senior Secondary Education (SS 1-3) is to enable pupils and students to achieve the following objectives:

a. Developing and transforming the Nigeria youths into effective and responsible citizens by making them law-abiding.

b. Creating awareness of one’s rights, duties and obligations as citizens of this great nation and also to appreciate the rights of other citizens, and

c. Helping the young people to acquire a sense of loyalty, honesty, discipline, courage, dedication, respect, patriotism and hard work. It inculcates in students, the spirit of nationalism and desirable habits, values and attitudes.

Civic Education had been in existence and gone into extinction before its resurrection through Social Studies Education. This is buttressed by Ogundare (2011) who concluded that in Nigeria, after independence in 1960, the upper primary and lower classes of secondary schools were offering Civics to their pupils. The subject
was replaced with General Knowledge and later with Social Studies in 1971, where Civics was an integral part. During this period, the search for the kind of school programme that could develop knowledge, skills and attitudes that citizens need to be useful to themselves and the society at large led to the introduction of the integrated Social Studies in Nigeria.

Hence, Civics became an integral part of Social Studies in 1971. Civic concept like citizenship, democracy, civic rights and responsibilities, leadership and followership were incorporated into the Social Studies curriculum (Ogundare, 2011; and Falade & Adeyemi, 2015). In addition, during the 1991 curriculum review conference, it was decided that citizenship education should be taught as part of Social Studies at certain levels of education in Nigeria.

Nigerian government started a 9-Year Basic Education Programme in order to attain the Millennium Development Goals (MDGs) by 2015. The 9-Year Basic Education Programme was also aimed at implementing the objectives of the National Economic and Empowerment Development Strategies (NEEDS) which include: value-reorientation, poverty eradication, job creation, wealth generation and using education to empower people (Nigerian Educational Research and Development Council, 2007). In view of this, there was the need to review, restructure and re-align the existing primary and junior secondary school curricula into a 9-Year Basic Education Programme.

In 2005, the National Council on Education (NCE) approved a new curriculum for primary and junior secondary schools in Nigeria. The newly approved curriculum is referred to as the Universal Basic Education (UBE) curriculum. The UBE curriculum structure provided for Lower Basic Education Curriculum (Primaries 1-3); Middle Basic Education Curriculum (Primaries 4-6) and Upper Basic Education Curriculum (JSS 1-3). An important aspect of the new UBE curriculum was the introduction of new school subjects at the Lower, Middle and Upper Basic Education levels. This was responsible for the re-emergence of Civic Education, as a separate school subjects, at the primary and secondary school levels.

Civic Education contents were disarticulated from Social Studies and by 2007 a 9-Year Civic Education curriculum for the Basic Education Programme was designed. Since then, Civic
Education is taught as a separate and compulsory school subject in Nigerian primary and secondary schools to proffer solutions to some of the social vices affecting Nigerian society. This is buttressed by Oyeleke (2011) who affirmed that a major improvement towards learning citizenship and morals of representative democracy is the introduction of Civic Education into primary and junior secondary schools in 2007. During the merging and harmonization era in October 2010, the President of the Federal Republic of Nigeria convened a National Stakeholders Forum to deliberate on the State of Education in Nigeria. Delegates at the summit called for immediate action to reduce the number of subjects offered at the Basic Education level. Consequently, NERDC was directed to review the 9-Year BEC in line with the recommendations of the summit (NERDC, 2012).

In view of this, related UBE school subjects were merged to form new subjects. For instance, Islamic Studies, Christian Religious Studies, Social Studies, Civic Education and Security Education were merged to form a new school subject called Religion and National Values. According to NERDC (2012), in the context of the current reduction, selection and harmonization of the UBE curriculum title, Religion and National Values is the umbrella embracing the previously autonomous subjects of Religious Studies (Christian Religion and/Islamic Studies), Civic Education, Social Studies and a new addition, Security Education. NERDC further stress that the rationale for the new title is the need to emphasize the importance of values across the educational spectrum. In this new arrangement, each of the subjects that were merged becomes a theme under the umbrella subject title.

The merging of the five subjects (Christian Religious Studies, Islamic Studies, Social Studies, Civics Education and a newly introduced subject called Security Education) into one integrated subject called Religion and National Values brought fundamental challenges (Onigiobi & Ojedokun, 2017) at the UBE level. The first challenge is that of teachers who had trained in the specific Civic Education contents and are now required to teach the contents from the five disciplines under one integrated subject (Religion and National Values). Religion and National Values curriculum was meant to be a basic introductory subject for higher level training to students intending to pursue all form of careers because the rationale for the introduction revolves round values orientation for
all learners (NERDC, 2012, Orji, 2012). Secondly, findings from previous studies also revealed that aspect of Civics Education in the Religion and National Values curriculum still had concepts beyond the level of the learners in the UBE, the content in the syllabus was still wide and the integration of the disciplines that make up Civic Education subject had not been effectively designed (Onigiobi & Ojedokun, 2017) because it has been crammed with four other subjects.

The roles of Civic Education cannot be under-estimated and the need for the subject in secondary schools cannot be over-emphasized. This is eloquently stated by Okan and Lawal (2011) cited in Falade and Adeyemi (2015):

*Civic Education plays a significant role in the development of a nation. This is because the development of a nation hinges on good and effective citizenship. No nation can thrive beyond the civic values and traits demonstrated by her citizens. This is the reason why civic values constitute the necessary foundation of a virile nation (113)*

Fafunwa, (2004), Falaye, (2008), Ogundare, (2011) and Falade & Adeyemi, (2015) conducted studies on factors affecting implementation of the Civic Education curriculum in the past, the studies revealed that limited information are available on Civics Education Curriculum for UBE and Basic Education (BE).

Adebayo and Zimba (2014) in their study discovered that both teachers and pupils regard Civic Education as highly effective in the development of learner’s Civic competency in terms of civic knowledge, civic skills and civic disposition. They were therefore of the opinion that Civic Education plays a significant role in the political development of the learner. Ezegbe, Oyeoku, Mezieobi and Okeke (2012) investigated the implementation of Civic Education at the senior Basic Education level in the capital cities of Anambra and Enugu States of Nigeria. A sample of 67 principals and teachers in selected secondary schools in both capital cities was used for the study. The study concluded that proper implementation of Civic Education at the senior Basic education level was improper and will engender training of citizens that can contribute to national development. Adeyemi, (2019) examined the perception and attitude of Civic Education teachers on civic competence of senior secondary school students in Osun State, Nigeria. A total of 300
teachers constituted the sample size for the study using multistage sampling procedure. His findings showed that the majority of the teachers (67%) had positive attitude towards civic competence of their students. His study also revealed a significant difference in the teachers’ perception of civic competence of senior secondary school students based on gender and religion.

In addition, there is need for regular update on the available information that has been documented on the assessment of teachers and students perceptions of the needs for Civics Education in Secondary school in Osun State since it was revised in 2012. Thus, it is as a result of this background that this study seeks to assess teachers and students’ perception of the needs for civic education in secondary schools in Osun State.

Statement of the Problem
Civic Education as a school subject was introduced to bring about an improved disciplined society through its systematic objectives. There is no doubt that some of these objectives have been achieved. However, since our society is dynamic and not static, there is need to constantly and periodically have an appraisal to know the extent of the realization of the stated objectives either from the perspectives of students, teachers, parents, or government. However, for the purpose of this study, emphasis is only placed on both students and teachers; hence this study.

Research Questions
The following research questions were raised to guide the study:
1. What are teachers and students’ perceived need for Civic Education in Secondary Schools in Osun State?
2. To what extent do the aims and objectives of Civic Education in secondary schools been achieved?
3. What are the factors confronting the teaching and learning of Civic Education in secondary schools as perceived by the teachers and the students?

Hypothesis
There is no significant difference in the teachers and students perception of the need for Civic Education in Secondary Schools in Osun State
Methodology
The study adopted descriptive survey research design. The population consisted of teachers and students in senior secondary schools in Osun State. The sample size consisted of 600 students and 60 Civic Education teachers. The multistage sampling procedure was employed for the study. The first stage involved the selection of one out of the three Senatorial Districts using simple random sampling technique. The second stage, involve selection of two Local Government Areas (LGAs) from the selected Senatorial District using simple random sampling technique. The third stage involved the selection of 15 senior secondary schools from each of the two LGAs making 30 schools selected altogether. From each school, two Civics teachers were equally selected using simple random sampling technique. Twenty (20) senior secondary school two (SS2) students were selected form each school using simple random sampling technique. Three research instruments were developed to elicit information from the respondents: “Teachers and Students Perceived Need for Civic Education Questionnaire” (TSPNCEQ); Aims and Objectives of Civic Education Questionnaire (AOCEQ); and “Teachers and Students Perceived Factors Questionnaire” (TSPFQ). The three instruments were administered on the sampled teachers and students. The instruments were subjected to face and content validity by experts in Test and Measurement and Civic Education. A trial test of the instruments on students and teachers of the senior secondary schools outside the target population was carried out yielding 0.76, 0.81 and 0.78 respectively using Cronbach Alpha statistics. Data collected were analysed using simple percentages, mean, standard deviation and relative significance index for the research questions while the hypothesis was analysed using t-test statistics.

Results

Research Question 1: What are teachers and students’ perceived needs for Civic Education in Secondary Schools in Osun State?
In order to answer this research question, students and teachers’ responses to items measuring the perceived need for Civic Education were subjected to descriptive analysis. The result is presented in Table 1.
### Table 1: Teachers and Students' perceived needs for Civic Education in Secondary Schools in Osun State

<table>
<thead>
<tr>
<th>S/N</th>
<th>Perceived Needs for Civic Education</th>
<th>Students</th>
<th></th>
<th>Teachers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Civic Education is responsible for the total upbringing of an individual in becoming an effective member of the community.</td>
<td>3.49 0.66</td>
<td>1</td>
<td>3.43 1.03</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Civic Education encourages peaceful co-existence of citizens for harmonious relationship and interaction between individuals and groups in the society.</td>
<td>3.47 0.59</td>
<td>2</td>
<td>3.55 0.95</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Civic Education enables students to have adequate knowledge of the problems facing the society and proffer solutions in tackling the identified and emerging problems.</td>
<td>3.28 0.75</td>
<td>7</td>
<td>3.62 0.74</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Civic Education helps students to be current on the present happenings in the community so that they will be abreast of latest development in government and communal events.</td>
<td>3.23 0.83</td>
<td>8</td>
<td>3.48 0.65</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Civic Education will enable leaders and followers to know their roles in the developments of the society as agents of social change.</td>
<td>3.33 0.69</td>
<td>6</td>
<td>3.32 0.65</td>
<td>7</td>
</tr>
<tr>
<td>6</td>
<td>Civic Education helps citizens to be aware of their rights, duties and obligations to Nigeria.</td>
<td>3.37 0.78</td>
<td>4</td>
<td>3.47 0.75</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
<td>Civic Education assists in enhancing individual growth which will ultimately</td>
<td>3.40 0.76</td>
<td>3</td>
<td>2.98 1.19</td>
<td>8</td>
</tr>
</tbody>
</table>
Table 1 shows teachers and students’ perceived needs for Civic Education in secondary schools in Osun State. It can be observed in the result that students ranked Civic Education as responsible for the total upbringing of an individual in becoming an effective member of the community as the foremost with mean and SD values of 3.49 and 0.66, whereas; teachers considered that “Civic Education prepares students for future career and leadership roles as certain basic skills are learnt that will enable students solve problems confronting their society” as number one need with mean and SD values of 3.65 and 0.63. Next in ranking of need from students’ perspective is that Civic Education encourages peaceful co-existence of citizens for harmonious relationship and interaction between individuals and groups in the society with respective mean and SD of 3.47 and 0.59. However, teachers see that Civic Education enables students to have adequate knowledge of the problems facing the society and proffer solutions in tackling the identified and emerging problems as second in hierarchy of their perceived need with respective mean and SD of 3.62 and 0.74. What students perceived as the least need for Civic Education is that Civic Education helps students to be current on the present happenings in the community so that they will be abreast of latest development in government and communal events with respective mean and SD of 3.23 and 0.83 while teachers rated the least, Civic Education assists in enhancing individual growth which will ultimately culminate in natural development with mean and SD of 2.98 and 1.19.

**Research Question 2:** To what extent do the aims and objectives of the introduction of Civic Education in Secondary Schools have been achieved?
Table 2: Teachers’ and students’ assessment of the extent to which aims and objectives of the introduction of Civic Education in Secondary Schools are being achieved

<table>
<thead>
<tr>
<th>Levels of Extent</th>
<th>Students</th>
<th></th>
<th>Teachers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency (f)</td>
<td>Percentage (%)</td>
<td>Frequency (f)</td>
<td>Percentage (%)</td>
</tr>
<tr>
<td>Low</td>
<td>13</td>
<td>2.2</td>
<td>3</td>
<td>5.0</td>
</tr>
<tr>
<td>Moderate</td>
<td>29</td>
<td>4.8</td>
<td>2</td>
<td>3.3</td>
</tr>
<tr>
<td>High</td>
<td>558</td>
<td>93.0</td>
<td>55</td>
<td>91.7</td>
</tr>
<tr>
<td>Total</td>
<td>600</td>
<td>100.0</td>
<td>60</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 2 shows students and teachers’ assessment of the extent to which the aims and objectives of the introduction of Civic Education in secondary schools are being achieved. The Table showed that 2.2% and 5.0% of the students and teachers respectively revealed that the aims and objectives of the introduction of Civic Education in secondary schools are being achieved at low extent. Also, 4.8% and 3.3% of the students and teachers respectively indicated that these aims and objectives are being achieved at moderate extent while 93.0% and 91.7% of the students and teachers respectively indicated that these aims and objectives are being achieved at high extent.

**Research Question 3:** What are the factors confronting the teaching and learning of Civic Education in secondary schools as perceived by the teachers and the students?
Table 3: Perceived Factors Confronting the Teaching and Learning of Civic Education in Secondary Schools in Osun State.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Factors</th>
<th>Students Mean</th>
<th>Students SD</th>
<th>Students R</th>
<th>Teachers Mean</th>
<th>Teachers SD</th>
<th>Teachers R</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lack of emphasis on Civic Education and character training.</td>
<td>3.48</td>
<td>0.76</td>
<td>3</td>
<td>3.00</td>
<td>1.19</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Non implementation of Social Studies programme in the senior secondary school level.</td>
<td>3.43</td>
<td>0.68</td>
<td>5</td>
<td>3.43</td>
<td>0.96</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Disorganized and duplicated Civic Education curriculum.</td>
<td>3.38</td>
<td>0.68</td>
<td>6</td>
<td>3.55</td>
<td>0.79</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Recitation and role learning method in teaching.</td>
<td>3.37</td>
<td>0.78</td>
<td>7</td>
<td>2.90</td>
<td>0.75</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Unstable Civic Education programme.</td>
<td>2.13</td>
<td>1.13</td>
<td>9</td>
<td>2.30</td>
<td>0.81</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>Lack of adequate human resources for civic education.</td>
<td>3.51</td>
<td>0.74</td>
<td>1</td>
<td>2.87</td>
<td>0.75</td>
<td>8</td>
</tr>
<tr>
<td>7</td>
<td>Lack of instructional materials/teaching aids.</td>
<td>3.49</td>
<td>0.71</td>
<td>2</td>
<td>3.40</td>
<td>0.96</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>Inadequate instructional materials/teaching aids.</td>
<td>3.47</td>
<td>0.72</td>
<td>4</td>
<td>2.88</td>
<td>0.72</td>
<td>7</td>
</tr>
<tr>
<td>9</td>
<td>Poor infrastructural needs in schools such as dilapidated classrooms.</td>
<td>1.58</td>
<td>0.73</td>
<td>10</td>
<td>3.35</td>
<td>0.99</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Poor morale on the part of the teachers due to poor or delayed remuneration.</td>
<td>3.37</td>
<td>0.82</td>
<td>7</td>
<td>2.78</td>
<td>0.64</td>
<td>9</td>
</tr>
</tbody>
</table>

Table 3 showed the perceived factors confronting the teaching and learning of Civic Education in secondary schools in Osun State from both students and teachers’ perspectives. Considered the foremost factor according to students is Lack of adequate human resources for civic education with mean and SD of 3.51 and 0.74 respectively. According to the teachers, Disorganized and duplicated Civic Education curriculum received the highest rating among other factors with mean and SD of 3.55 and 0.79 respectively. This is
closely followed by Lack of instructional materials/teaching aids (3.49, 0.71) from students' perspectives and Non implementation of Social Studies programme in the senior secondary school level (3.43, 0.96). Ranked third by students is Lack of emphasis on Civic Education and character training (3.48, 0.76), whereas, teacher ranked Lack of instructional materials/teaching aids (3.49, 0.71) third among other factors. While the students ranked Poor infrastructural needs in schools such as dilapidated classrooms (1.58, 0.73) the least, teachers regarded Unstable Civic Education programme (2.30, 0.81) as the least of all factors confronting the teaching and learning of Civic Education in secondary schools in Osun State.

Hypothesis

**H0**: There is no significant difference in the teachers and students' perception of the need for Civic Education in secondary schools.

**Table 4: t-test of significant difference in teachers and students' perception of the needs for Civic Education in Secondary Schools**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>600</td>
<td>26.8950</td>
<td>3.38342</td>
<td>-1.356</td>
<td>658</td>
<td>.176</td>
</tr>
<tr>
<td>Teachers</td>
<td>60</td>
<td>27.5000</td>
<td>2.98868</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4 shows the difference in the teachers and students' perception of the need for Civic Education in secondary schools. It can be observed from the table that there was no significant difference in teachers (\(\bar{x} = 27.50, \text{SD} = 2.99\)) and students' perception, \(\bar{x} = 26.89, \text{SD} = 3.38; t (658) = -1.356, p > .05\), of the needs for Civic Education in secondary schools. Since the p-value is greater than .05 thresholds, we therefore do not reject the stated null hypothesis. The results showed that there was no significant difference in the teachers and students' perception of the needs for Civic Education in Secondary Schools in Osun State.
Discussion

The findings on Table 1, revealed teachers and students perceived need for Civic Education in secondary schools in Osun State. These need includes responsibility for the total upbringing of an individual in becoming an effective member of the community, preparation of students for future career and leadership roles as certain basic skills are learnt that will enable students solve problems confronting their society; and informing students on the current on the present happenings in the community so that they will be abreast of latest development in government and communal events among others are the stated perceptions for the students or teachers? Nevertheless, teachers view Civic Education as a tool which enables students to have adequate knowledge about the problems facing the society and solutions in tackling the identified problems; and it enhances individual growth which will ultimately culminate in natural development. This finding agreed with the views of Adeyemi and Falade (2015), which concludes that Civic Education is concerned with the development of values, social norms, skills and democratic ideals in the citizens. This connotes that Civic Education includes the provision of information and learning experiences to equip and empower citizens to participate in democratic processes.

Results in Table 2 showed students' and teachers' assessment of the extent to which the aims and objectives of the introduction of Civic education in secondary school are being achieved. High percentages of students and teachers indicated that these aims and objectives are being achieved at high extent. This may be as a result of the fact that both the students and the teachers have the same perspective on the aims and objectives of Civic Education. The finding is in line with the view of Adebayo and Zimba (2014) who submitted that both teachers and pupils regard Civic Education as highly effective in the development of learner’s Civic competency in terms of civic knowledge, civic skills and civic disposition. They were therefore of the opinion that Civic Education plays a significant role in the political development of the learner. This contradicted the view of Ezegbe, Oyeoku, Mezieobi and Okeke (2012) who lamented that the implementation of Civic Education at the senior Basic Education level in some capital cities of Nigeria was improper and these may engender training of citizens that can contribute to national development. That is, the curriculum was not properly implemented. They further recommended among others
that federal government should make policy that will accelerate training and retraining of Civic Education Teachers for better productivity.

Moreover, findings in Table 3 depicted teachers and students perceived factors confronting the teaching and learning of Civic education in secondary schools in Osun State. These factors from teachers perspective includes: Disorganized and duplicated Civic Education curriculum; Non implementation of Social Studies programme in the senior secondary school; Lack of instructional materials/teaching aids and; Unstable Civic Education programme while on the part of the students these factors includes: Lack of adequate human resources for Civic Education; Lack of instructional materials/teaching aids and; Poor infrastructural needs in schools such as dilapidated classrooms. This is in consonance with the views of Fafunwa, (2004); Falaye (2008); Ogundare, (2011); Falade and Adeyemi, (2015); and Onigiobi and Ojedokun, (2017). They asserted that the aforementioned factors amongst others are factors affecting successful implementation of the Civics education curricular at both Basic Education and Senior Education Levels respectively.

In addition, an hypothesis was tested that there was no significant difference between the teachers and students perception of the needs for Civic Education in secondary schools. In order to test this hypothesis, students and teachers scores on perception of the needs for Civic Education in secondary schools were subjected to t-test of significant difference. Findings of result in Table 4 revealed that there was no significant difference in teachers and students perception of the needs for Civic Education in secondary schools. Since the p-value is greater than 0.05 thresholds, we therefore do not reject the stated null hypothesis. The result concludes that there was no significant difference in the teachers and students perception of the needs for Civic Education in secondary schools in Osun State. This agreed with the view of Dagnew and Asrat (2016). They purport that teachers and students perception have an enormous effect on the successful implementation of quality education in schools, quality of teaching and quality of learning.
Conclusion
The study concluded that both teachers and students were of the opinion that aims and objectives of Civic Education were achieved at high extent in senior secondary schools in Osun State, Nigeria. Not only that, both students and teachers had the same disposition on the need for Civic Education in secondary schools in Osun State.

Recommendations
• Civic Education at the senior Basic Education level should be properly implemented so as to foster effective training of citizens that can contribute to national development
• Teachers’ participation should be taken into cognizance in the development of curriculum.
• Civic Education should be promoted by all and sundry since it has the capacity to perform its mission of stimulating civic competence, critical thinking skills, and proffer solutions to difficult socio-economic and political issues of a country
• Civic Education curriculum should be reviewed form time to time to address the emergent issues in the society

References
and Challenges. *International Journal of Research in Arts and Social Sciences*, 4, 115 - 125


Abstract
The importance of education to the development of any nation cannot be overstressed. This paper examined the role of women education in re-cultivating academic integrity in Nigeria. Promoting gender equity through the instrument of education is seen as a boost to greater economic, political and social growth. Educating women is the key to breaking endemic poverty and re-cultivating academic integrity among other things. Women education will alleviate the burden of government, especially in the implementation and execution of educational policies at the grass root level. This paper recommends that promotion of women education will bring moral soundness, foster growth and development in the family, and the society at large; since women, in the past and present, are traditional educators, care givers of basic needs of the society, such as food, nurturing and health care.

Keywords: Education, women education, academic integrity and re-cultivating

Introduction
Re-cultivating integrity through women education is a pivot of women development. The approach is a measure where the formal and non-formal education programme of women is deliberately made to include the history, roles and various important contributions of women as well as their challenges. The last four decades have witnessed uncommon attention on women and their development in all areas of life, globally, and Nigeria in particular. Attempts have been made at the world, Commonwealth of Nations, African, regional and national levels to address the issue of gender.
The United Nations took the lead by declaring 1975 as the International Women’s Year. It was followed by series of conferences on women in 1975 (Mexico City), 1980 (Copenhagen), 1985 (Nairobi) and 1995 (Beijing) (UNESCO, 2000). At the African level, corresponding conferences have been held on women in 1977, 1979, 1984 and 1994 (Achele & Mbachu, 2011). Most outstanding of all these conferences was the Pan African Conference on the education of girls in 1993 which gave birth to the Ougadougou Declaration (Achele & Mbachu, 2011). At the national level, in conformity with the Nairobi Conference of 1985, the Federal Military Government of Nigeria promulgated a decree establishing the National Commission for Women in 1989. This became a full-fledged Ministry of Women Affairs in 1995 (HajoSani, p220). Among other things, the Ministry has the responsibility of initiating, implementing and monitoring programmes for the growth and development of women.

Several recommendations emanating from the United Nations’ fora and conferences on the needs of women have mentioned and projected education as the key factor in overcoming difficulties facing women in most societies. In this regard, the World Declaration on Education For All, Jomiten 1990, became an important milestone in the bid towards basic education for girls and women. From then onwards, women education was placed at the front burner in developmental discourse, with the aim of re-cultivating academic integrity, among others.

Nigeria, like most countries of the world, has made remarkable progress in education and especially in women education, though not yet enough. Education in Nigeria has not been used as a tool for re-cultivating academic integrity. In Nigeria, according to the National Policy on Education, Federal Republic of Nigeria (2004:3), education serves as a tool for social reforms, value orientation, economic enhancement, political transformation, among others. The question then is “has our education achieved the above objective in Nigeria and other African countries?” Fifty years after independence, Nigeria is yet to achieve our stated objectives in the National Policy document. Our educational system has continued to deteriorate due to several reasons and there is general dissatisfaction with the system, as it has become non-functional and cannot meet the needs of the society. For education to play its vital role of transforming the society and bringing about value re-
orientation women, as traditional educators, must be given their proper place. Therefore, this paper seeks to thoroughly examine the option of using women education to re-cultivate academic integrity in Nigeria.

**Definition of Concepts**
To understand this discourse properly, there is need to define and explain the basic or vital variables in the topic – Women Education and Academic Integrity.

**Education**
The aim of this paper is to seek to understand education from the point of view of its utility, functionalism, pragmatism and moral values. The National Policy on Education (2004.6) stated that education in Nigeria is an instrument ‘per excellence’ for affecting national development, and also, a process of developing an individual physically, mentally, socially, emotionally, culturally and technologically, to enable an individual function well wherever he/she finds himself/herself.

Education, according to Segun Ibietan & Azuh (2016), is a process by which individuals are assisted through teaching to develop their capacities for their own good and the good of the society. Unachukwu (2003) sees education as a veritable instrument that propels the society to a higher level. Thus education goes beyond the ability to read and write. It is a tool for solving human problems. Osokoya (2010:1) simply defined education as a “process of cultural transmission and renewal”. Agina-Obu (2018:14) in attempting to project the importance of education to the society stated that “education is the societal instrument for its survival, growth and development.” And Okorosaya-Orubite (2002:16) defined education as the “transmission of culture from one generation to another for the benefit, survival and continuity of any given society.” Saba (2009) sees education as a progressive experience, which is liable to changes. Onwughalu (2012) noted that education is a function of the needs of the particular society. Its sole purpose is to fulfil the individual and societal needs, both in the present and future. Macioms & Plummer (2002) defined education as “an institution guiding the transmission of knowledge, jobs, skills, cultural norms and values.” In summary, they see education as an integral part of the society. Without doubt, the above definitions and
explanations of education have some common terms, which have to do with the survival, growth, development, continuity and culture of the society. And being a continuous process whereby the adults in the society help the younger ones to grow in knowledge, positive values, good attitude and morals, it means that the adult members of the society should possess these attributes and knowledge. And the adult members of every society include males and females. In sum, in all these definitions, education has to do with transmission of cultural values, knowledge, continuity, renewal, growth and development. In addition, undoubtedly, education has no limit in terms of gender, class, religion or colour.

The Concept of Women Education
The wrong notion about the dignity of women has for centuries affected the education and role of women in society. The misconception associated with the identity and psyche of women has equally widened the latitude of the controversy about women education. In some cultures, women were denied access to formal education because educating them would mean placing them on the same level with men in terms of social and economic status. To Nwafor & Agumagu (2012), the discrimination against women is as old as man and is global in nature. It cuts across human race and various cultures (Zuofa, 2006) Osakoya, 2008). For instance, Parveen (2018) lamenting on the state of women in Pakistan said:

"Female education in Pakistan, its status and standard particularly is at its lowest ebb: Thousands of girls' otherwise intelligent and capable enough to get education but are deprived of because of multi-farious socio-cultural and economic reasons and gender prejudices. Due to this reason they are unable to play active role in the development of society."

In modern times, the issue of Malala Yousafzai from Pakistan remains quite instructive. In 2013, Malala, aged 15, was shot by the Taliban on her way to school because of her open campaign for the education of the girl-child. Instances abound where the girl-child is faced with manifest injustices in the areas of health, distribution of economic resources, education and violence. No doubt, in Nigeria,
we have a lot of “unknown and unsung” Malala among the girl-child (Agumagu, 2018).

The situation in Pakistan is similar to what obtains in most third world countries today. The concept of women education is difficult to define, especially with its evolving nature. Women education could be viewed as a process of bringing the female gender into the stream of formal education so as to make them intellectually, socially, economically and politically formidable instruments of national development (Nwafor & Agumagu, 2012) Parvenu (2008) succinctly describes women education as: “a process of educating females in order to make them efficient and effective, members of society both at home and outside. It should enable them to look after and take care of their daily life duties and responsibilities as well as their legitimate rights.”

For Aggarwal (2004), women education should be examined not only in the context of social justice, but also because it quickens the social transformation. In the same way, Zuofa (2006) defined women education as that which equips the female to enhance her innate tendencies in order to function effectively within her environment – her family, community and society. In other words, there cannot be educated people without educated women.

The maxim, educate a woman and the whole nation is educated still holds sway. Inadequate access to education has been recognized as one of the main obstacles that have slowed the progress of women. Generally, education imports knowledge, skills, positive values, morals from one generation to the next. Pre-colonial African societies, did not give women education any attention. Rather women were seen as the keepers of home and bearers and rearers of children.

Colonialism, Christianity and the introduction of money economy did not help to improve the lots of women. Today, the situation has changed drastically. Women, in addition to their traditional role as mothers, wives, daughters, are now teachers, civil servants, engineers, lawyers, medical doctors, judges, nurses, etc. (Agumagu, 2000); These changes have revealed the need for women education in the society. What then, is women education? Women education refers to every form of education given to women that aims at improving their knowledge and skills. It could be formal,
informal or non-formal. It goes beyond reading and writing (Sehgal Rohit, 2015). It was the need for women education that resulted in the International Conferences that were held especially for women in different parts of the world, with several countries in attendance. For instance, Mexico 1975 with 133 countries in attendance, Denmark 1980 with 11,300 delegates from 145 countries, Kenya 1985 with 1,000 delegates, Beijing in 1995 with 6,000 delegates as well as New York in 2005 (Akubuiro & Omeje, 2012:1)

The implication is that the overall interest and benefit of women education is not limited to her alone, but to the whole world. Anjali & Singdharani (2007:102) affirmed this when they said that "the developmental role of women education is multi-pronged affecting not only their lives but also others who are likely to depend on them."

Women education goes beyond attending school. It is about creating self-confidence, self-worth, re-orientation of values, emotional intelligence and integrity. It is about women adapting to the changing world and circumstances, making and taking decision about their own lives and making contribution to their communities and the world at large.

Women education is a deliberate attempt made in the later part of the 20th century by the United Nations, several world bodies, organizations, nations, groups and individuals to highlight the activities of women, see the barriers and challenges they face daily in life and see possible ways and means of reducing these challenges (Agumagu, 2011).

At different fora during these conferences and seminars, it was made clear that education remains the key to enhance women's status, bridge the gap between male and female gender and possibly unlock the hidden potentials in women. Women education gained impetus when it was acknowledged that women, being the first educators of children, must have solid education.

It was on the strength of the United Nations' Declaration of the Decade of Women in 1975 that women education took the center stage. This followed the World Conference on Education For All held in Jomtien, Thailand in 1990. This conference recognized the importance of women education and the need to close the gender gap in school enrolment. The height for women education was in 2000 at the UN Millennium Summit and World Education
Forum in Dakar, Senegal, where the “push” for girls and women education gained attention (Mishra, 2005:17)

Following these efforts at the International and African levels, Nigeria as a member nation of UN had to put in place all necessary arrangements and devices needed to eliminate gender discrimination and enhance women education (Ciroma, 2006). To this end, Nigeria has domesticated some of the International Conventions documents and they include:

- Convention on the Elimination of all Forms of Discrimination against Women (CEDAW);
- African Protocol on People’s Right and the Rights of Women (APPRRW);
- Convention on the Rights of the Child (CRC); and
- Millennium Development Goals (MDGS) (Akubuiro, 2012)

In these documents, specific provisions are made in respect of women education. For instance, Article 10 of CEDAW (1979) reiterated the need to ensure equal opportunity for men and women.

In conformity with the UN directives on gender parity, the then Federal Military Government of Nigeria by a decree, established the National Commission for Women in 1989. And by 1995, it was upgraded to a full-fledged Ministry of Women Affairs (Sani, 2001). The Ministry was charged with the responsibility of initiating, implementing and monitoring programmes for the progress of women. They were further tasked with the duty of:

• Promoting women’s access to economic resources;
• Encouraging women to acquire both formal and informal education;
• Increasing women’s access to appropriate, affordable and qualitative healthcare and related services;
• Eliminating all forms of violence against women;
• Encouraging the media to always portray positive images of women;
• Increasing women’s participation in decision-making;
• Establishing national mechanism towards the emancipation of women; and
Integrating women into environmental management (Sani, 2001:221)

In Nigeria, another instrument created to enhance women education was the Nigeria National Gender Policy Act of 2006 (Ciroma, 2006); its targets and objective were to create awareness for the advancement of women, especially in the areas of education and empowerment. For instance, Objective 2, target (2) aims to “Establish and strengthen appropriate educational, training, institutional and operational frameworks that link the macro-policy environment effectively with the micro level where women, men and communities are experiencing the manifestation of gender equality by 2010”. Equally, Objective 7, target (a) is to “guarantee equal access of women, men, girls and boys to both formal and informal education and skills development opportunities through special programmes and initiatives by 2015” (National Gender Policy, 2006). The listed measures are steps in the right direction by the Federal Government of Nigeria as the importance of education in advancing the status of women cannot be overemphasized. Only education can give women knowledge, skill, empowerment, analytical and critical mind, and moral values which in turn will re-cultivate academic integrity.

**Academic Integrity**

Understanding the concept of academic integrity requires a clear and deep understanding of the meaning of integrity. The term integrity is defined in different ways. The Webster Comprehensive Dictionary of the English Language (2004), has defined integrity as uprightness of character, probity; honesty. Unimpaired state; soundness; and undivided or unbroken state; completeness. Integrity is also, synonymous with fidelity, justice, virtue and worth.

On the other hand, academics imply a place or center of learning, institution, a college, a place of scholarship and knowledge or ideas. A place for the advancement of arts, science and technology. From the above definition and description of the two words, academic integrity simply means education that is wholesome, laced with core values of knowledge, moral values, justice and honesty. Education should serve as an instrument for transmitting right knowledge and values through the various
The role of women education in cultivating academic integrity in Nigeria.

The Nexus Between Women Education and Academic Integrity in Nigeria

The nexus between women education and academic integrity could be seen and felt in the following areas where women play a vital role in the family and the larger society:

The Role of Women in the Society

The difficulties of describing the role of women in the family and the larger society are profound. The role of women varies across societies and through time. However, there are certain functions
that are peculiar to women as a gender. Agumagu (2000) outlined some of these roles to include:

(a) Reproduction-bearers and rearers of children – Reproductive role;
(b) Health attendant to their families;
(c) Teachers to their children – the first educator to the child;
(d) Household keepers – cooking, washing, cleaning, fetching of water;
(e) Producers of economic goods through agriculture, fishing, gathering;
(f) Trading – small and medium scale;
(g) Lives stock-keeping – domestication of animals;
(h) Other economic activities such as weaving, pottery, sewing, etc.; and
(i) Managers of their homes – especially in low seasons – income-earners and in decision-taking.

The basic questions that arise therefore are: What are the consequences of women education on these roles played by women in the family and the society? And how does it affect academic integrity?

Women Education and Academic Integrity

Without an iota of doubt, academic integrity will be a deceit or illusion if every member of the society, especially women are not part of it. Every gender, age and status, has a role to play in academic integrity. However, women have a vital role to play in ensuring a brighter and prosperous future of children. Women education will be a very important tool for academic integrity in Nigeria, a country which at the moment is faced with lots of challenges. Our educational value system has been damaged with high level of examination malpractice, insecurity, cultism, unemployment, poverty, hunger, etc.

Women education will reintroduce moral values in the family and the society at large since women are the first educators and teachers of their children. Value education is concerned with the advancement of morals, ethics, justice, honesty, which is the kernel of academic integrity. Ankpo (2011) in trying to justify the inclusion of moral education in our curriculum has this to say:
"Graduates should actually be found worthy first in character, then in learning, every youth should see himself/herself as a stakeholder in the Nigerian project, by exercising all requisite citizenship roles and responsibilities. The respect for human life and the dignity of labour should be inculcated in our children at the early age ..."

Women as mothers, and in their reproductive role as bearers and rearers of children, are major stakeholders in the Nigerian project. It is only when women are exposed to education that they can effectively play this role of being a child giver and saver. Through education there will be reduction in infant mortality, the threat to overpopulation and prevention of all manner of diseases and maternal death. Of course, healthy environment through women education will usher in sanity in the family and the larger society. The implication, therefore, is that there will be wholesome living, justice, respect for human life and moral values in the society.

Women education will alleviate poverty in the society. The family was and still is the basis of the economy of any society (Agumagu, 2005). Women play acknowledged roles in providing food for their households. Women were managers of homes, farm, the social organizations and the church.

Educating the woman will no doubt increase her ability to perform these essential functions given to her by nature and the society. A good performance of these roles will have a ripple effect on the larger society. Her level of literacy will affect the children she nurtures, it will affect her income-earning capacity and other human endeavour (Nwafor & Agumagu, 2010)

Re-cultivating Academic Integrity through Women Education

Women education is the appropriate tool for re-cultivating academic integrity in Nigeria. Nigeria is at a level now where the education system and curriculum can no longer meet the needs of the people and the nation generally. The entire education system needs to be reviewed. There is need to introduce morals, ethics, justice into the curriculum at various levels of education in Nigeria. To implement programmes based on value education, women education must be strengthened and women equipped cognitively, affectively and psycho-motor wise to actualize academic integrity in our education system.
Holistic education involves the development of the three domains of education. The cognitive domain is identified by individuals' intellectual ability. The affective domain stressed on the learners’ emotions, attitude, character, values and behavior while the psycho-motor domain deals with skills. In Nigeria, our current education system emphasizes the cognitive domain in our teaching and learning method. The curriculum which should capture the three domains of learning, which is cognitive, affective and psycho-motor for the development of the learner and academic integrity, gives more attention to the cognitive and psycho-motor domains. While the affective domain which deals with values, attitude, emotional control and management skills are neglected (Nemine & Benwari, 2017).

The springboard of teaching and learning is effective management. Values are not given but are acquired through teaching. Affective domain of learning includes students’ motivation, attitude, perceptions and values. While affective management is about teachers’ effectiveness in the planning, delivery and assessment of students.

The inability to re-enact the affective domain in our educational system has led to the decline in academic integrity. Women education can be the platform for re-enacting affective teaching and learning and re-cultivating academic integrity in Nigeria.

Women are the first teachers to their children, they are caregivers of basic needs of the society like food, nurturing, shelter, primary health management etc. Women education will accelerate the implementation of government policies and programmes at the grass root levels. For instance, in the government UBE (Universal Basic Education) programme, mothers are needed for proper execution.

Educating women will no doubt re-cultivate the much needed academic integrity in Nigeria. Educated women will make significant contributions in academic integrity because the knowledge they have acquired will enhance their roles both in their reproductive, productive, economic, health and moral circles of education. Women education has a direct influence on every aspect of life, especially in academic integrity. It acts as a medium through which knowledge, values, goods attitude are acquired by the younger children who are the future of the nation. Women
education advances not only the lives of women but also others who are dependent on them. That is the nexus between women education and academic integrity.

Nasiru & Ali (1992) in Aja (2000) outlined some innate characteristics of women which if properly harnessed with education will usher in academic integrity in our education system and in Nigeria. Some of these characteristics include:

(1) Tolerance and endurance – she is patient as a mother;
(2) Fairness – she is humane;
(3) Public relation – she runs an open door policy;
(4) Persuasiveness – can easily sway the authorities to positive action;
(5) Emotional stability – can work well under pressure;
(6) Rationality – she is calm and cool-headed; and
(7) Forgiveness – she does not harbour grudges when giving correction, she corrects in love.

A close look at some of these characteristics of women shows that what we clearly need to re-cultivate academic integrity in Nigeria is an advancement in women education. Women are custodians of moral literacy, value education and positive attitude and behaviour. Value education is not only taught at school, but also should be taught at home and through the instrument of mothers, as the first teachers of children.

Although, in Nigeria there has been an increase in the enrolment of girls/women in school, both at the primary, secondary and tertiary levels. What is still lacking is the power to utilize women education in political arena, economic empowerment, political power, education and social participation. When educated women are properly utilized, then academic integrity will be reflected in all spheres of our nation’s life.

Conclusion
How best can we summarize the importance of women education in re-cultivating academic integrity in Nigeria? There can be no doubt of the negative consequences of neglecting women education upon our standard of education and value system.
In the words of Mahatma Ghandi in 1925 and quoted by Kimbro (1998), in Agih & Agih (2017), there are seven deadly sins in the world. These are:

"Wealth without work; pleasure without conscience; science without humanity; knowledge without character; politics without principles; commerce without morality; and worship without sacrifice."

It is imperative to note that all these border on lack of academic integrity. A close look at the issues raised by Ghandi shows they are mostly the problems facing the world today. No doubt our country Nigeria is manifesting most of these signs. Education which should be the key to unlock some of these difficult challenges and problems, have become valueless. What then shall we do? Remain helpless? Or seek refuge in affective learning and teaching?

We will not ponder on the obvious. Nigeria needs to emphasize due development of the affective domain of education, which inculcates individuals with honesty, truth, patience, justice and selflessness. And these are the core values of academic integrity and education all over the world.

From the discourse above, and looking at the role of women in the family and the larger society and some of the innate characteristics of women, it is clear that women education is one of the most useful and effective tool or instrument in re-cultivating academic integrity in Nigeria. A recent case of women education and integrity, could be the celebrated case of Josephine Ugwu from Enugu, who works with the Federal Airport Authority of Nigeria (FAAN) as a cleaner. From her narrative, she is a casual worker and earns N7,500 (Seven thousand, five hundred naira only) per month. In the course of her duty, she returned millions of forgotten money. That earned her recognition and she was awarded the 2019 Public Service Award by the Federal Government of Nigeria. According to her, she derived the confidence after the public lecture given to them by the airport authority on honesty and integrity. The lecture was given by Margaret Obot, a woman also.

The impact of women education in re-cultivating academic integrity and in social transformation of Nigeria cannot be over-stressed. Education, devoid of affective learning and teaching, cannot effectively perform its functions of transforming the nation,
especially in the face of gender disparity. It is believed that if women are equipped intellectually, socially, economically, emotionally, then the family and the larger society will be better off.

Women education remains a veritable tool for academic integrity, social transformation and development. However, there are barriers and impediments to women education which in turn have affected academic integrity in Nigeria. In Nigeria, as in many countries of the world, cultural barriers, economic backwardness, sex role expectation, religious beliefs and practices, family background, low level of education are some of the constraints that have militated against women education in Nigeria. However, it is important to note that women education has multiplier effect on productivity, economic growth and academic integrity. What is the way forward?

**Recommendations**

Based on the above discussion, the following suggestions are proposed:

- Make curriculum relevant to the lives of women and the girl-child;
- Decentralize educational planning process and administration to reach the rural areas;
- Mobilize public opinion for women education;
- Adult literacy classes for women for the teaching of simple skills like sewing, basic health care, family planning, among others;
- Government should place more value on women education; and
- Affective domain of teaching and learning should be the core of our curriculum.
References


SECURITY CHALLENGES IN SECONDARY SCHOOLS AND SUSTAINABLE PEACE DEVELOPMENT IN NIGERIA

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Abstract
This paper examines security challenges in secondary schools and sustainable peace development in Nigeria and the way forward, it seeks intervention into the myriads of insurgences and other social vices and deviant behaviours perpetrated by the students within and outside the school which constitutes insecurity in the school environment. The paper therefore discussed the concepts of sustainable peace, insecurity in schools, security challenges in secondary schools, both internal and external, causes of security challenges in schools, security challenges in Nigeria as a whole, Few of the emerging issues and security challenges highlighted include deviant behaviours such as: drug addiction, campus prostitutions/promiscuity, cultism, alcoholism, indecent dressing, vandalism and unrest, while some of causes of insecurity mentioned include: inadequate socialisation, frustration, poor parental upbringing, feeling of rejection, lack of cooperation, strict rules and regulations by the school authority, poverty and so on. Some recommendations were provided which include; collective concerted efforts to address current security situation in our country, Security of the children should be guaranteed for effective teaching and learning to take place, The use of Information Communication Technology (ICT) should be intensified in curbing insecurity in schools, Entrepreneur's development
education should be part and parcel of secondary school curriculum, School administration should invent security and vigilante group in the schools to ensure safety of the student in campus premises.

**Key words:** Security Challenges, Secondary School, Sustainable Peace Development, Internal Security Challenges and External Security Challenges

**Introduction**

The spate of insecurity in the country is becoming very alarming. Security is one of the important pre-conditions for peaceful human existence. Security sometimes referred to as protection of lives and properties. It is a sine qua non for a viable and sustainable society. Indeed, without a measure of public safety, normal human activities that enable a society exist, thrive and grow will be severely compromised (Nwadialor, 2011). Day-in-day-out in Nigeria, news seems to get from bad to worse, as the security situation deteriorates. The country that sends peacekeeping assistance to neighbouring countries over the years can no longer guarantee peace for citizens in her own territory.

It is now a common phenomenon to wake up to the news of bombings, children butchered in the night, kidnapping and abduction of innocent school children during broad day and or night, communal clashes, Fulani herdsmen and farmers clashes.

The security mess in Nigeria was as a result of accumulation of national problems ranging from leadership issue, corruption, unemployment, illiteracy and unnecessary wrangling among the political class. The desperate, intolerant and ruthless contests among political parties, political leaders and their followers are partly responsible for security challenges in the country. Nigerian politicians will do anything to win at the polls, including killing, assaulting and disrupting public peace (Nwadialor, 2011). Sadly, some of those that constitute public nuisance have a way of escaping arrest or subverting punishment, leaving the vulnerable members of the society—women and children—to bear the brunt.

However, secondary education is expected to provide succour by giving education and skills for individual’s to leave an healthy and productive lives hence, the issue of joblessness will be at low ebb. The National Policy on Education (FGN 2014) stated that secondary education is the education children received after
primary education and before the tertiary stage of education, the broad goals of secondary education shall be firstly, to prepare the individual for useful living within the society and secondly, for higher education. Therefore, this education through its various subjects is expected to develop an individual recipient physically, mentally, socially, emotionally, culturally, and technologically so as to be useful to themselves and contribute to national development and live a peaceful and safety life in the society (Oke, 2011).

The crux of the matter is how to manage learning activities in the secondary schools with the present security challenges in Nigeria. Secondary education is for the development of personality and potentialities of an individual so as to enable him operate wisely and successfully in any society he finds himself. The onus lies on the school as a whole and teachers in particular; who teaches the students in the classrooms.

**What is Sustainable Peace?**

Sustainable development is key to sustaining peace and vice versa. This is the condition of no conflict, violence, jealousy and living with mutual cooperation and understanding. Sustainable peace implies that if there is no chance of conflicts at all among the people of the society. A cooperative and disciplined behaviour is important to maintain peace in family, society and whole country, to maintain a lifestyle of tranquillity throughout one’s life without encroaching on others freedom or right. Therefore, inculcating this concept into children learning contents in school would amount to preparing them for living a peaceful life in and outside the school which will translate to maintaining peaceful society as a whole. Amanchukwu (2012)

**Security Challenges**

Security challenges mean unsafe grounds which might make it difficult or even impossible to channel any form of education especially secondary education that will bring about sustainable development in the entire country. These security challenges can be internal or external. It is internal, if the causes are from within the school premises and external if it is caused by the society or outside the school. These are social vices and deviant behaviours which include rape, cultism, drug abuse, gangsterism, prostitutions and so
on which pose serious security challenges to the management of schools (Oke, 2018).

**Security Challenges in Secondary School**

Deviant behaviour: this is both internal and external factor that can promote insecurity in educational institutions. Every society has a set of norms and values that every individual within that society is expected to conform to, and where there is deviation from such norms and values, it will be considered as abnormal or deviant because such behaviour is socially disapproved by the school. Deviant behaviour has been a problem to the school everywhere in the society. Indiscipline and violent student’s behaviour is detrimental and disturbing not only to an individual student but also to effective learning and teaching in classroom Esyenck (2017). Such behaviour could be seen as crime, drunkenness, campus prostitution/ promiscuity, cultism, gambling, stubbornness, smoking and immorality etc. Below are the common types of acts which may be termed as deviant behaviour which destruct or constitutes insecurity in schools.

**Drug addiction:** this is getting used to wrong use of drugs and misbehaving thereafter. The drug could be injected, ingested, inhaled or taken orally thereby having both physiological effects. Gimmer (2015) posits that drug addiction is any substance that interferes with a person’s health or ability to do well in school or to earn an appropriate living or when there is disruption of a person’s individual or social adjustment or both.

**Alcoholism:** this is too much of alcohol intake and doing the wrong things that are taboo in the society. Alcohol is mostly taken by different class of human being, but when it is abused the adverse effect become misbehaviour. Esyenck (2017) said that alcohol impairs cognitive functions in the area of intelligence, reasoning and judgment of time in a person who is an alcoholic. An alcoholic is a person who is unable to control his drinking. He will like to want to, or tries to, but cannot moderate his drinking. He cannot avoid taking it in excess and such habit destruct school performance and constitutes insecurity and threats to the school authority.
Campus Prostitution: this implies Boys and girls sleeping with one another out of wedlock which society kick against. Rimfat (2009) defined prostitution as a service that may be performed by either males or females and although in nearly all societies, acts of prostitution are commonly performed by females. It is a spread social menace that sometimes student mainly girls involved in. It is a sexual relationship between boys and girls outside wedlock for gain, either in cash or kind, base on what is the motivating factor (i.e. to either or obtain good grade from teachers or mostly due to economic situation.

Indecent dressing: It is against the norms and values of the society for girls to wear half naked clothes but because of deviant behaviour they can wear themselves half naked, even though the society frown at it, while the boys wear trousers at their buttocks which they called {sakgging}. This type of acts can be corrected by the joint efforts of parents, school and society.

Fighting and vandalism: Students tend to fight one another because of show of superiority and power, in the process they often vandalise school properties. This is a deviant behaviour because it contradicts the norm of the society to be destructive; this poses insecurity challenge in school.

Cultism: this is refers to as Occultism or possession of mystical power with secret modus operandi, liking to meeting in very old places like cemeteries and abandoned buildings. They usually engage in gangster activities like taking of cocaine, marijuana and even drink human blood, which bring about serious security challenges to students and staff in school premises. Cultism which has been on the rise in Nigeria can be prevented at the early stage in a child at home or in the school, if parents and teachers ensure that the right values of the society is taught to the child because what is confronting Nigerian in school today is cultism. According to Asinya (2012) there is hardly any single Nigerian institution of higher learning that has not experienced this menace of cultism, the violent reality of schools today makes one wonder how and if students are actually able to learn in such volatile environments.
Causes of Security Challenges in Schools

A. Inadequate socialization.
   A child that has only one parent may end up having inappropriate socialization. Single parent or death of one of the parent can lead to above. Chauham (2008) states that the home environment is important in developing the personality of the child. The presence of both parents is very important in the upbringing of the child as each of them is endowed with their different style of correction measures that will help in molding the child to behave well.

B. Frustration
   A child who is unable to adjust himself to a new situation may try to look for alternative. Merriam-Webster defined frustration as a feeling of anger or annoyance caused by being unable to do something. When this is the condition with any student, such student may either withdraw from school or engage in anti-social behaviour. Chauham (2008) further states that if the social authorities do not pay adequate attention to the need of the children at different level in organizing academic as well as curricular activities the children will be frustrated and their frustration will be manifested in anti-social activities.

   Parents can also make their children frustrated due to their inability to provide what they (children) need at school, yet another cause of frustration in students may be examination failure. When some students find themselves in this kind of above situation, joining bad friends may be an alternative for them.

C. Poor Parental Upbringing
   Parents are the first teacher of the child. They are suppose to tell what they are expected to do, which is based on the acceptable lives style of the society, but that is not done and also the children are not given proper discipline by parent whenever they do wrong. Goffman (2013) opines that if the parents have no criteria of good discipline, sometimes they are too strict and sometimes too lenient, such type of discipline creates mental conflict in the mind of the child, if the parents quarrel drink or
criticize each other in the presence of the children. These acts will have bad effects on them.

The loose moral values of the family which throw the child into deviant behaviour at the initial state follow him to the school. Those that never have such background from their homes may gradually be introduced into it or because of the derived satisfaction from the actions of those with deviant behaviour.

D. Feeling of rejection
Ammanchukwu (2014) agree that when people feel rejected by the traditional values of school as both the academic and cultural levels, they may set up their own counter school culture, students who are classified as underachievers and troublemakers by school authority may find little interest in schooling. They may then look for their own way to satisfy their needs. This kind of behaviour may be identified by teachers as deviant because the students are unwilling to study.

E. Lack of cooperation by subordinate
Deviant behaviour is also a case of refusing to act on superior instruction as in the case of America president, Donald Trump (2017), where he ordered a ban on seven Asian countries and the Ag Attorney General of America refused to act on the instruction. Student can refuse to act on the school authority's instruction which become deviant behaviour.

F. Strict rules by school authority
Reynolds (2010) states that the degree of stringency with which schools enforces rules is positively associated with levels of students absenteeism and delinquency. If the school controls students strictly, negative effects might naturally follow. The school should be careful to watch to know when their rule is affecting the student negatively and balance the situation.

G. Poverty
Poverty gives psychological trauma to a person. A student that comes from a poor family, where he is not being able to meet up with his expectation in life needs serious guidance and love so
that he or she will not resort to deviant behaviour of stealing at the end.

**Causes of Insecurity in Nigeria**

Apart from internal and external causes of insecurity in secondary schools across the country, insecurity in the country is caused by a number of reasons, some of the reasons are:

- Lack of transparency from the leaders: The political office holders are not sincere. The leaders and members of their immediate family display affluence in a way to oppress the followership. Transparency is the level of openness, sincerity and clarity of the leader in his administrative process (Oke, 2011). Transparency according to Akpa (2002) is the appropriateness, prudency and accountability of office holders in dispatching his administrative responsibility. Leaders in Nigeria feel above others because of their level of insincerity when in position of authority and this poses serious security challenges to the society.

- Unemployment situation in the country: The rate of unemployment of graduate and non-graduate in the country is alarming and no measure of control is underway to checkmate the unemployment. Nwadialor in Oke (2018) found that about 40% of Nigerians, most of who are within the youth bracket, are not gainfully employed. Many graduates and non-graduates are free and idle. Our leaders are able to capitalise on this and offer the unemployed meagre amount to serve the selfish interest of the leader.

- One of the aims of technical education is to give training and impart the necessary skills leading to the production of craftsmen, technicians and other skilled personnel who would be enterprising and self-reliant. In contrary, the policy on higher education was conspicuously silent on the self-employment version as the higher educational policy focused mainly on the development in the economy especially in the field of Science and technical orientation, while no attention was given to self-employment skills. Instead the whole educational policy put a lot of emphasis on acquisition of technical skills for the purpose of gaining employment in government and industrial sectors. (Oke, 2013).

- High rate of Illiteracy: The rate of illiteracy in Nigeria is alarming. The United Nations Educational Scientific and Cultural Organization (UNESCO, 2010), reports that one out of every five
Nigerian children is out of school. These out of school children, can do anything to survive because they lack formal trainings or skills for meaningful survival.

Another cause of insecurity could be traced to the lop-sided development the country found herself, for example, few cities were developed to standards; Nigerian resources are channelled to those cities while the rural areas are living in abject poverty. People living in slums like Maroko, Ajegunle, some slum dwellers in port Harcourt, Kano, Ibadan to name but a few see the city dwellers as their enemies. Sporadic fighting and killing between Aguleri and Umuleri in Anambra State was attributed to years of neglect and poverty which has put the environment in a sorry situation.

The masses in rural areas appear to have waged a cold war against the urban dwellers. They organize kidnapping of some influential men/women who visit home and ask for a huge ransom. As soon as they are done with their operations they retreat to the rural/slum areas in hiding, so as to escape the law enforcement agencies. Adejumo (2014) enumerated a lot of insecurity in Nigeria such as: food insecurity, financial insecurity, personal insecurity, national insecurity and others. All these affect human lives in one way or the other thereby affecting the national economy.

Security challenges in Nigeria as a whole ranges from violence in schools which entails fighting, use of dangerous weapon like guns, machetes and others; to violence outside the school environment and extended to the larger society as kidnapping, Boko haram, raping and all others. The Nigerian government needs to provide able bodied, well talented men and women who could move the nation forward. Nigerian schools are the best ground to nurture those future leaders who will make adequate use of scientific discovery to produce a modern man, new equipment/technology, new political understandings and accommodations, innovations in various fields of endeavour. How can this great nation achieve these feats if the environment is very hostile?

In his research findings, Katsina (2017) discovered that insecurity is manifestation of deep rooted and structurally entrenched crisis of development that creates the environment for the emergence of conditions of poverty, unemployment and inequality in the country. According to him, these could lead to frustration, alienation and ultimately, social discontent that spark violence and insecurity. Without the enabling environment, he
concluded, these conditions could not have metamorphosed into serious national security problems threatening to tear the country apart.

Nigerians have lost a lot of manpower, school children and properties since the insurgence of Boko haram started in the northern part of Nigeria. They have attacked churches, schools, police stations, army barracks and gatherings everywhere. The deadly operations of Boko Haram made the Federal government of Nigeria close down Unity Schools in the North East and not less than 10,000 secondary school students were affected.

The Caption: Insecurity: “Jonathan Slams Govs for Shifting Blame onto FG” (THISDAY, March 30, 2014. P.8). The then president of the Republic of Nigeria stated that failure to provide elementary education is responsible for insurgency. The former President of the Federal Republic of Nigeria informed that the federal government, by the Nigerian Constitution, does not control primary and secondary education, that they only face tertiary schools. He further stated that the federal government despite the constitutional provision had intervened at the primary education level with the provision of Almajiri schools, in collaboration with the states.

Despite that, many almajiri children are still found roaming about the nooks and crannies of some places in the northeast especially, Bauchi. The former president said that “if we have security issues, whether Boko Haram or Kidnappers or whatever, these are people who could not have primary school education, could not have secondary education and have no hope. And miscreants, criminals recruit them and use them. If you see what they wear, they wear rags, they don’t wear normal cloths. All they put on is not worth ₦100 but they carry assault raffles that are worth more than ₦250,000. Somebody gives them food so that they will have strength to kill”.

Insecurity as it is in Nigeria has dangerous consequences. Firstly, it threatens the very existence of our nation thereby making nonsense of the labour of our heroes past towards nation building. Secondly, it slows down progress in all dimensions. It is a general truth that no concrete development could be attained in an atmosphere of instability. On the educational front for instance, development is being affected as schools in the affected places were under lock for more than 10 months. Thirdly, it is leading to a serious dent on the image of the country within the international
country; we now have cases where some countries warn their citizens concerning visiting Nigeria. Equally, Nigerians living abroad and those willing to travel abroad have become subjects of serious ridicule as they are exposed to all manners of unbelievable treatments.

The recent revelation of criminality shows that quality education is the key to bringing normal situation in the society. When a child receives quality education he will be in a better position to decide what to do with his life instead of carrying deadly weapons and killing innocent civilians. Quality education exposes one to various skills and knowledge and makes one make sound judgment and wise choices too.

Education is the key to sustainable living and effort should be channelled towards it in order to achieve the national goals and Sustainable Development Goals (SDGs). Curriculum should be overhauled to accommodate modern teaching and learning by employing the use of computers and its accessories to make learning practical and enjoyable. Students should be taught how to source information, send and retrieve information. Therefore, quality education is needed to attain sustainable living and in order to achieve that quality teachers are needed to pilot the affairs of the schools. Quality teachers according to McCormick (1996) are the teachers who elicit the spirit of competitiveness among the students, to take on tasks that seem to be beyond their capacity to grasp, to discover and develop their real mettle as thinkers. Again, quality education can be defined in various ways. It is the learning that meets high standards. The mode of learning is recognized by international standards. It incorporates use of modern methods of learning like e-learning.

Management of secondary education in a period of security challenges requires quality teaching by highly qualified teachers who have a passion in their lives and a deep regard for their students. The National Policy on Education (FGN,2014) stated that no education system can rise above the quality of its teachers. Therefore the Nigerian education system should strive to develop teachers of high quality in order to take the Nigerian child to greater heights. Ololube (2009) citing Katz (1988), Reiger and Stang (2000 :62-64) identified that in order to be effective in the classroom teachers need to be curious, imaginative, empathetic, interesting, humorous, friendly and hardworking, thereby creating a learning
environment that enhances and strengthens the learning disposition of the students. Quality teaching makes student reason highly thereby making use of higher cognitive domain to achieve higher goals (Ololube, 2009). Furthermore, Nigerian children need to be taught by quality teachers who could apply various innovations that would help the students acquire live skills that will help them be their own masters in a harsh economy, that is, being security conscious, self-employed and even employer of labour.

UNICEF (2000) stated that children have a right to education, and quality education for that matter.

Education is for social reconstruction (Ukeje, 1966; Sathe, 1997) and it offers solutions to the problems a society is engulfed with. As teachers are the touch bearers in creating social cohesion, national integration, the quality of education is a direct consequence and outcome of the quality of teachers and teacher education system.

In their own observation, Uhl and Anderson (2001) opined that teachers should be taught to understand a set of five core principles like respecting life and natural process, living within limits, valuing the local materials, accounting for full costs, and sharing of power. Such ecological literacy is fundamental to living fully and wisely as the capacity to read and write. The curriculum should guarantee ecological literacy reducing alienation from natural world and increasing connection to the natural world through the use of internet.

**Ways out of the Security Challenges in Nigeria**

1. It is imperative that we collectively make concerted efforts to address current security situation in our country. Irrespective of ethnic, religious, cultural, political and other such divisive affiliations, all of us have a duty towards maintaining peaceful co-existence in the country.

2. Government at all levels should come out with security measures that could stem the tide of insecurity across the land, our leaders need to eschew all divisive tendencies and other acts that could further throw the country into crisis.

3. Security of the children should be guaranteed for effective teaching and learning to take place. In order to save students, parents, teachers and other stakeholders from
insecurity, it is crucial that all tiers of government find a lasting solution to the school safety problem.

4. The use of Information Communication Technology (ICT) should be intensified in curbing insecurity in schools. Such as: automated emergency notification systems—one of the fastest growing safety and communications applications in schools today.

5. Entrepreneur's development education should be part and parcel of secondary school curriculum and there is the need to orientate the technical and vocational education more towards self employment by the teaching of enterprise education in every technical and vocational Schools/Colleges.

6. School administration should invent security and vigilante group in the schools to ensure safety of the student in campus premises as well as emergent religious organization should revisit their doctrines which give room for promoting moral decadence.

Conclusion
This paper has revealed that secondary education which is the intermediate and foundation of development in the country is beseeched with myriads of deviant behaviours and security challenges. However, for meaningful development to take place in the secondary institutions, the government must be ready to take responsibility to handle the issues positively and address the challenges adequately.

The opening paragraph of the National Policy on Education (2014) upheld that education is the only instrument par excellence in national development. Consequently, any nation that toils with its education does so at its own peril. Explanation lies on the fact that it is through education that a nation position itself in the threshold of national development as well as educate its citizenry out of the scourge of STDs, insurgency, crime wave, malaria and others too numerous to mention. Education is the machinery that propels a nation into self reliance and development. As a social service, by implication, education should be accessible to all, male or female, Jew or gentile, Christian or Muslim, rich or poor. The responsibility of preventing or curbing insecurity in our schools should be a collective effort resting on parents, teachers, religious leaders,
school authorities as well as government. This can be done through appropriate upbringing, counselling and sanctions where necessary; it is through this that the nation can achieve global security and sustainable peace development.

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NATIONAL IDENTITY AS A VERITABLE TOOL FOR PEACE, UNITY, SOCIAL-RECONSTRUCTION AND NATION – BUILDING: THE NIGERIA’S EXPERIENCE.

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Abstract
Nigeria, the most populous country in black Africa currently estimated at about 201 million is made up of over 300 ethnic groups and 400 languages. The country’s vastness in population and her ethnic and cultural diversities could have ordinarily been harnessed for peace, progress and national development. But unfortunately, ethnicity in Nigeria has been observed not to have served as a centripetal force in the country. It is upon this premise that this paper examines national identity as a potent instrument for effecting peace, unity, social and psychological reconstruction towards nation – building. The methodology adopted is the logical exploration of system of beliefs and assumptions, while the approaches are analytical descriptive and prescriptive. The paper interrogates the concepts of integration and ethnicity, national identity for peace and stability, nation building, and recipes for building a strong, united and virile nation, relying solely on secondary source of data. The paper recommends that the provision of education for young learners in the country should be total and complete amongst others.

Keywords: National Identity, Peace and Unity, Social - Reconstruction, Nation Building and Nigeria's Experience.

Introduction
The geographical entity called ‘Nigeria’ lays between latitude 4° and 14° North of the equator, and between longitudes 2° and 15° East of the Greenwich Meridian. It covers a land area of 922,200km² which is four times the size of United Kingdom. Up till 1914, this
National Identity as a Veritable Tool…

geographical area existed as separate entities, with different culture, language, religion, dressing, administrative styles and the like. On January 1, 1914 these three areas were amalgamated and unified into a country christened Nigeria, under the leadership of Sir Fredrick Lugard, the then Governor-General. There were administrative reforms soon after the birth of Nigeria as a nation. Notable among the reforms was the administrative reform of Bernard Bourdillion, the then Governor-General of Nigeria on April 1, 1939, which split the southern province into two regions – Eastern and Western regions with headquarters at Enugu and Lagos respectively. The Northern Province was not split as a result of inhabitants’ cultural homogeneity, with Kaduna as the administrative headquarters.

Richard’s constitution of 1946, which became operational on January 1, 1947, divided the country into the three regions and created regional councils - Houses of Assembly for the East, West and North with capital at Enugu, Ibadan and Kaduna respectively. The creation of these regions along ethnic lines with imbalances in human population and geographical landmass met with criticism from nationalists such as late Chief Obafemi Awolowo and Chief Hezekiah Oladipo Davies.

In 1954, Nigeria became a federation when each of the three regions became autonomous within the federation, and Lagos was carved out from the Western Region and was declared “Federal Territory” i.e. the seat of federal government. On October 1, 1960, Nigeria gained political independence from Colonial Britain, but did not assume Republican status until 1963, and therefore severed all administrative connections with Britain. In that same year, precisely on October 1, 1963, a Mid-Western region was carved out of the western region. This was followed by twelve (12) states on May 27, 1967, nineteen (19) states in 1976, twenty-one (21) states in 1988, thirty (30) states in 1991 and later increased to thirty-six (36) states as it were today in the country.

Since the evolution of Nigeria as a sovereign state particularly after independence in 1960, she has no doubt witnessed marked social, political, administrative and economic development. Regrettably, these developments have been along ethno-cultural and tribal divide. Politically speaking, political parties evolved along regional or tribal axis, as evident in the areas captured by each of the then three parties. There was no party that could boast of few
members in a region other than its region of origin. For instance, the Northern People’s Congress (NPC) which was formed in 1949 captured the north; the Action Group (AG) formed in 1951 dominated the west, while the National Convention of Nigeria Citizens (NCNC) formed in 1944 occupied the political landscape in the eastern part of the country. These parties later contested the governance at the Centre, with NPC emerging victorious over others, as it won majority seats in the House of Representatives. The government was headed by Sir Abubakar Tafawa Balewa. Such was the political situation in the first republic that lasted six years (1960–1966), when there was coup and counter coups that brought Lt. Col. Yakubu Gowon in as the Military Head of State in August, 1966.

The second republic (1979-1983) witnessed the registration of six political parties namely: National Party of Nigeria (NPN), Unity Party of Nigeria (UPN), Nigerian Peoples’ Party (NPP), Great Nigerians Peoples’ Party (GNPP), Nigerian Advanced Party (NAP), and Peoples’ Redemption Party (PRP). Three of the six registered political parties, were popular during the second republic. These were NPN, which dominated the North, UPN, the West and NPP the East. The picture was not that different in the third republic and fourth (contemporary) republic (1999 – till date), even with ninety-one (91) registered political parties in the country (Punch Newspaper, 2018, August 14).

**Need to Integrate the Different Ethnic Groups in the Country.**

Integration in the society (Social Integration) refers to a structured process in which members participate in dialogue to achieve and maintain peaceful social relations (Social integration, n.d.). Ethnicity on the other hand has been sociologically described as a shared culture and way of life, reflected in language, religion, culture, music and art. It is often a major source of social cohesion and social conflict (Thoughtco, 2019). Kaneshiro, Geling, Gallert, and Millard (2011) who worked on the challenges of collecting data on race and ethnicity in a diverse and multiethnic state concluded that the understanding of these two concepts had led to the understanding of the factors that affect disease and health. While ethnicity has been positively utilized in Hawaii where this study was carried out, it is not in Nigeria. Since Nigeria came into existence as a nation, she still retains and exhibits her pre-amalgamation distinct features, reflecting regional, tribal or ethnic values, attitudes, religion,
language and cultural practices. These are not bad as it were, but constitute source of grave concern when they are now being used by the different ethnic or religious groups in the country to undermine national interest, unity and peace of the nation and its development.

As a result of ethnicity, national issues are generally perceived from narrow ethnic levels. “Ethnic and hereditary loyalties rank very high and they tend to undermine national unity and cohesion in the country. Tribal loyalty remains very strong than national unity. Therefore, stable and viable Nigerian nation has been hampered and thwarted by the inability of Nigerian leaders to positively influence ethnic groups to view issues from national perspectives”(Fadeiye, 2005, p.148). Instead of Nigerians using the dynamism inherent in the pluralistic and diverse nature of the country to advantage by tapping the values inherent in the various groups for social and economic development, it has become a devastating force, with a number of negative consequences. These consequences include ethnic politics and election rigging, unhealthy rivalry among ethnic groups, tribal sentiments, personality clashes, disagreement among political parties, serious protests, rebellions, assassinations, destruction of personal and government properties, kidnapping, religious intolerance, communal or inter – tribal clashes, disrespect for constituted authorities, ethnic militancy and the civil war of 1967–1970, to mention a few.

Thus, developmental programs have been hindered in the process, as Nigerians identified with the leaders of the same linguistic origin, instead of seeing them as representing their corporate interests. The Nigerian leaders have not helped matters either. They encouraged nepotism, as each ethnic group struggles to field its kinsmen to occupy exalted national positions, particularly, the office of the president of the nation as shown in past general elections in the country. This situation therefore calls for critical re – examination of the entire scenario with a view to resolving the major issues involved, bury the differences among groups in the country, making them to see the need for unity and peaceful co-existence without which no progress and development would take place, and see themselves as brothers and sisters to forge ahead as one and indivisible whole.
Roles of Education in the Integration Efforts
By integration efforts, it is meant all the programs, schemes, policies and principles put in place to unite the nation. These include the establishment of Unity Secondary Schools, meant to bring together students from all geo-political and ethnic groups; National Youth Service Corps (NYSC), established to encourage common ties among Nigerian youths (NYSC, Act, 1993); Federal Character Principle, put in place to ensure that appointments to public service institutions fairly reflect the linguistic, ethnic, religious and geographic diversity of the country; and all the symbols of unity. Okeke (2019) who worked on the implementation and enforcement of federal character principle in Nigeria found that the principle is subject to persistent abuse, because it is contained in chapter II of 1999 constitution, which is non-justiciable.
However, according to Ejiogu (2001), the Federal Government is not oblivious of the importance of high morality and ethical standards of behavior among her citizens. This explains why the Federal Government of Nigeria [FGN], (2014) in the National Policy on Education (NPE) enumerated the role of education in its aims of education in the integration of the country to include, but not limited to:
i. Citizenship education as a basis for effective participation in, and contribution to the life of the society; and
ii. Character and moral training and the development of sound attitudes”.

Specific goals and objectives of secondary education in Nigeria are:
i. To raise a generation of people who can think for themselves, respect the views and feelings of others, respect the dignity of labor;
ii. To appreciate those values such as respect for the worth and dignity of man;
iii. Development of moral and spiritual principles in interpersonal and human relations;
iv. Shared responsibility for the common good of the society, and citizens imbued with national consciousness and national unity (p.12).

Education is indeed a tool for character molding and training, because education develops in the recipients positive attitudes and
changes their behavior for the better. Through sound education, students learn to listen to others and to respect their views and opinions. In schools, learners are trained to embrace dialogue as a way of resolving differences instead of taking up arms, in order to contribute their quota to the peace, stability and unity of the nation. This however has implications for both government and the teaching force. The government is expected to adequately equip the school in all ramifications to enable it discharge its statutory duties, while the teaching force at all levels of the educational system is expected to lead exemplary lives, worthy of emulation by their students in selfless and commitment to service, honesty and transparency, hard work, punctuality to duty, justice, fairness as they are role-models to the learners under them. Thus, it is evident that morality and spiritual principles in inter-personal and human relations; and the inculcation of the right type of values and attitudes for the survival of the individual and the Nigerian society (Federal Government of Nigeria, 2014), become crucial in our efforts at integration in the country.

According to Ejiogu (2001) morality is alien to Nigerians prior to the enunciation of the national policy. For instance, it is said that throughout the rule of Uthman Dan Fodio (1167-1233/1754-1817), there was strong condemnation of bribe taking, nepotism, oppression of the weak by the strong and ostentatious display of wealth (Islahi, 2008). Our forefathers were clearly refined, sensitive, highly civilized, educated people, intellectual nobility, immeasurably superior to many men of their vintage in their love for things of the mind, in the elegance and refinement of their social intercourse, in their outlook over the whole field of human creativity and the whole domain of thought. How profound their thoughts, how lofty their ideals and moral teachings. Those were the likes of the village teacher of the old, who though poorly paid, was nevertheless happy, proud and enthusiastic as he selflessly performed the chores of teacher, baby minder, catechist or Imam, local justice of peace and marriage counselors simultaneously. Those were the likes of most of our nationalists who fought so that we who came after them might have an independent, oppression-free, united and prosperous nation. They counted no cost, nor did they enrich themselves unlawfully or immorally. Busari (2018) examined the personality and contributions of Awolowo to Socio-economic development of Nigeria, and concluded that Awolowo was responsible for most of
the progressive social legislations that made Nigeria a modern nation. That was an era when Nigerians were truly their brothers’ keepers. Every adult-member of the community could discipline an erring child whether or not he knew the parents. The sense and feeling of togetherness was very much alive. It must be admitted however, that we still have today sprinkles of goodness and good people here and there, but the fact remains that they are not many and that should be a matter of great concern to us all. However, for education to effectively play its roles, there is need for paradigm shift from over concentration of attention on the cognitive domain to paying attention to other domains of learning (affective and psychomotor), particularly the affective domain. A close observation of the question papers at any level of education will confirm this fact. While the cognitive domain deals with intellect development, the affective objective develops the learner's emotions, feelings, attitudes, morals, virtues etc. It is of no use to produce learners who are intellectually sound, but found deficient in character. This therefore calls for curricula review particularly at the elementary and secondary school levels, so as to catch them young.

**Concept of National Identity for Peace, Unity and National Stability**

i. Nigeria’s flag

The Nigerian flag was designed Micheal Taiwo Akinkunmi in 1959. It is a bi-color of green and white. It is a piece of cloth divided vertically into three equal parts, colored green-white-green. The two green stripes on the flag represent Nigeria's agricultural wealth, because Nigerians are predominantly farmers, while the white
stripe at the middle of the flag represents unity and peace, and the collective national wealth and prosperity of the country. The national flag should be hoisted in front of all offices in Nigeria. However, there are rules governing the hoisting of the Nigeria flag and its maintenance. On no account should any other flag be raised higher than the Nigerian flag as a sign supremacy and honor for the nation, teaching the citizenry that national interest should be placed over and above self or ethnic interest in all our actions. The Nigerian flag must be hung on important days or any important event, and every day in public institutions, such as independent day, sport festival days, and in the offices of military, para-military and other public institutions. For instance, in cases of mass death in the country such as flood disaster, terrorist attack as we have it currently in northern Nigeria of Yobe, Borno and Adamawa, fire outbreak, plane crash, ghastly motor accidents, armed forces remembrance day and the like, the Nigerian flag is hoisted at half-length to respect the fallen heroes. The flag must be hoisted at sunrise and lowered at sunset. Finally, if for any reason, the Nigerian flag get torn, it must be replaced immediately.

ii. Nigeria’s Coat of Arms

The Nigerian coat of arms is a symbol of national unity, state power and authority which was officially adopted in May 1960. Every item found on the coat of arms has a special meaning in Nigeria’s history. It is an emblem which shows the unity of the country and stand for authority and power. The black shield stands for fertile soil of Nigeria, while the two white horses represent dignity and pride of Nigeria. The white ‘Y-like’ mark on the shield represents rivers Niger and Benue which flow through some parts of Nigeria. Above
the shield is a red eagle which represents the strength of the nation. The flowers stand for the beauty of Nigeria. They are of the species costusspectabilis and are found in most parts of Nigeria. The coat of Arms carries the Nigerian motto “Unity and Faith, Peace and Progress” It is written on the golden ribbon at the bottom of the shield.

iii. The National Anthem is the most popular of all the national symbols of Nigeria. The national anthem uplifts the faith of every Nigerian; it reminds us of our goals and revives us to keep building the nation until it stands mightily. It is usually sung in primary and post primary institutions and during government functions to reaffirm citizen’s commitment to the service of their fatherland. It was composed by Mr. Benedict Odiase, the then director of Nigerian Police Band and was officially adopted on 1 October, 1978. It has two stanzas viz:

1. Arise, O compatriots  
   Nigeria’s call obey  
   To serve our fatherland  
   With love and strength and faith  
   The labor of our heroes past  
   Shall never be in vain  
   To serve with heart and might  
   One nation bound in freedom  
   Peace and Unity

2. O God of creation  
   Direct our noble cause  
   Guide thou our leaders right  
   Help our youth the truth to know  
   In love and honesty to grow  
   And living just and true  
   Great lofty height attain  
   To build a nation where peace  
   And justice shall reign.
The national anthem recognizes the historical past of the country, as well as the aims and aspirations for the coming generation. The national anthem seems to have strong hold on all Nigerians regardless of their locations both inside and outside the country. It is a clarion call to serve our fatherland with love and strength and faith. One can safely say that the National anthem is one of the most important symbols of the country. According to Cerulo (2001), National Anthem like other symbols can inspire nationalistic sentiment by creating bonds between citizens. This bonding power emanates from the symbols’ sacred nature. As citizens join in veneration of the symbol, individual interests become secondary to those of the nation.

iv. The National Pledge is an oath of allegiance of support for the country. Often times, it is recited after the National anthem. The National pledge was drafted by a Nigerian Professor, Prof (Mrs) Felicia Adebola in 1976 and in September 1976, General Olusegun Obasanjo decreed that all schools children should recite the national pledge on daily basis (Obasanjo, 2003). The national pledge goes thus:

I pledge to Nigeria my country,
To be faithful loyal and honest,
To serve Nigeria with all my strength,
To defend her unity, and uphold,
Her honor and glory,
So help me God.
v. Nigeria’s Currency (Naira)

National symbols also include the legal tender of any country. Frankenfield (2019) described currency as a medium of exchange for goods and services, stressing it is money in the form of paper or coins, usually issued by the government and generally accepted at its face value as a method of payment. The naira is Nigeria’s official legal tender since 1973. It is used in day to day transaction within the country. The Central Bank of Nigeria is the only authorized issuer of the naira. On different denominations of the Nigerian Naira (#5, #10, #20, #50, #100, #200, #500 and #1000), the pictures of heroes of the country is inscribed. The #50 note most especially denotes unity in diversity. The presence of various tribes and culture was fully depicted on the #50 note.

vi. Nigeria Armed Forces

The Nigerian Armed Forces (Army, Navy, and Air force) are the Armed Forces of the Federal Republic of Nigeria in charge of defending the territorial integrity of the country. The armed forces are a unique symbol of our national unity. On several occasions, they have fought for the course of the Nigerian state such as coup d’état of 15 January 1966, counter-coup of July 1966 and the civil war (1967 -1970); Africa and the world at large in various peacekeeping missions which had earned them international recognition. Their distinct professional uniform differentiates them from other armed forces in other countries of the world.
A critical examination and thorough analysis of each of the few instruments of national unity shown above reveals that in principle, they were well intended, configured and well packaged, with a view to making Nigerians see themselves as one and indivisible entity. In other words, the essence of these national symbols of identity is not only to remind us that we are Nigerians, but also to constantly remind us Nigerians of the need for unity, identity and loyalty. This way, we would be fulfilling the requirements of a modern nation. The concept of a “nation” in modern times has more of a political connotation than ethno-geographic or socio-cultural meaning. The major attributes of contemporary “nation” are:

i. Togetherness (i.e. the ‘we’ feeling), and

ii. Putting national interest above individual, group or ethnic interest, that is, being loyal to the nation through obedience to the federal government, as opposed to showing more loyalty to one’s ethnic group or state (Olasupo, Oladeji & Ijeoma [2017]).

These parameters therefore lead us to visualize a ‘Nation’ as a group of people with a common purpose, with genuine feeling of togetherness, who have acquired political independence in a defined geopolitical entity, where a large number of human group can practically perceive themselves primarily as members of one whole group or entity, rather than members of one ethnic group or component unit. This is exactly what we hope to achieve in this country when every member has fully imbibed the philosophy behind the institution of national identity and internalised them in their psyche. It is only then a Hausa man who has been accepted as an indigene of the local government council area where he has resided for long can aspire to contest for the office of the Chairman of that local government without fear of intimidation; it is only then a Yoruba man can take up an employment in Igboland on merit without fear of tribal discrimination and only then the Igbo man can freely do his business in the north (Hausaland) without ethnic or religious harassment from the indigenes (Federal Character Commission [FCC], 1996). It is then we are set to build a united and virile nation.
Concept of nation-building

Nation-building and integration are two related concepts which imply concerted efforts aimed at bringing people of different background, affiliation, and interest together for the purpose of achieving common objectives. Nation Building according to Passi (2018) is a multidimensional concept which involves the active participation of its citizens in various walks of life, stressing that a strong and powerful nation is built on dedication and hard work of its citizen and some amount of smart planning on the part of the Government. Dinnen (2006) sees nation building from development perspective consisting of three main elements viz:

i. The development of an effectively functioning state that is accepted and accorded legitimacy by majority of its citizens. Central to this are the functions of securing a monopoly of force, guaranteeing security for the population and neighboring countries, the rule of law, and the provision of public assets. 

(ii) Nation-building also requires a physical, social and communications infrastructure that is shared by the entire civil society. These assets must be accessible to all groups of the population and be used by them for transactions and communication. It is difficult to build a sense of nation in a country containing regions or areas whose inhabitants are cut-off physically and socially from the rest of the ‘national’ population. 

(iii) In addition, nation-building presupposes a socio-cultural structuring and integration process leading to shared characteristics of identity, values and goals. It is not so much the homogeneity of these characteristics that is crucial, rather it is the acceptance and toleration of heterogeneity and the facilitation of inclusion.

Consequent upon the foregoing, nation building could be described as an attempt at promoting the survival of a nation and to build a virile and dynamic nation. It is an attempt to harness all the potentials of the nation, human and material resources for the benefit of the citizenry. It is the involvement and contributions of individuals, groups and organizations, in political, economic, religious, social and cultural spheres of life.
Recipes for Building a Strong Nation

Techniques for building a strong, united and virile nation are replete in literature. Fukuyama (cited by Powell, 2012) opines that a national identity must be forged from within. He observed that external forces can erect the skeleton of state in an embattled country, creating police forces, administrative structures, and taxing authorities. Fukuyama argued that nation building involves a shared sense of national identity, built on elements that tie people together such as shared culture, language, and history — that cannot be imposed from without. Fukuyama provided an overview in which he said large, diverse nations have a harder row to hoe in creating national identities. He cited Nigeria as an example, where little effort has been expended on nation-building, with resulting dysfunction and inter-group violence, while the United States is an example of a diverse nation where people feel a sense of national identity not because of shared ethnicity or longstanding cultural history, but because of a shared set of ideals. Contributing to this discourse, Passi (2018) identifies facets of Nation building to include tapping the potential of its human resource, reducing the social and economic disparity that exists in the society and creating an enabling environment, wherein individuals can live freely and attain their best in life. While Meikeng (2019) sees building a successful nation as involving a good and clean government, a cooperative business community, and a united and inclusive civil society, Ferraro (2009) views it from improving governability and public management angle.

All these are sound approaches to building one and indivisible nation, where all the federating units have a shared set of ideals, where no unit claims superiority over the other, where rule of law, justice, fair-play are given expression in the political, economic, religious, socio-cultural landscape of the nation. However, given Nigeria’s peculiarity, in addition to the foregoing, consideration must be given to the following:

There must be political education. Our political leaders should be educated to rise above petty jealousies and ethnic chauvinism. They should be national in outlook and take comments or criticisms in good faith. People should be encouraged to express their views without associating such views with ethnicity. People should not be labeled as unpatriotic because they are radicals. The formulation of political parties should not be regionalized or be
confined to states of origin; rather they should be national in outlook. Government at whatever level should remain neutral in religious matters. They should adhere to the Nigerian constitution of 1999, which stipulates secularity for Nigeria. The introduction of the National Youth Service Corps (NYSC) is also seen as a calculated attempt at nation-building. Efforts should be made to enable it achieve its laudable objectives. The use of all the symbols of national identity should be encouraged. They help in our drive at nation-building as they give a sense of pride and belongingness.

**Conclusion**

It is evident that the social and psychological reconstruction of the individual minds is crucial to the survival of the nation as an entity. This can only be achieved through sound education that is expected to be provided by the state. For instance the recent crimes, crises and violence in some parts of the country, notably in Borno, Bauchi, Yobe, Kaduna and Kano states of northern Nigeria in which hundreds of lives were lost, and properties worth millions of naira were destroyed, was made possible because the leaders of the sects were able to "arrest" the minds of their followers through "misguided education" making the followers to believe that western education is sinful. Consequent upon which many youths tore their certificates, and adults resigning their appointments in their places of work. This clearly is a negative use of education. In the same vein, we can positively utilize education at all levels to influence the learners to jettison vices and embrace virtues such as love for one another, kindness, respects for others’ views and opinions, cooperation, justice, honesty, fair-play and trust in other people and being ones brothers’ keeper to mention but a few.

**Recommendations**

The following were recommended:
The provision of education for young learners in the country should be total and complete. The provision today as it were, is lop sided and incomplete in the sense that, only one domain of learning (Cognitive) is concentrated on, out of three domains. This has led to the production of thousands of intellectuals who are found wanting in terms of character, which explains why a greater percentage of fraudsters, armed and pen robbers are university graduates. The
affective and the psychomotor domains of education have long been sacrificed at the altar of intellectuality.

Interestingly, many of the mottos of our tertiary institutions take cognizance of the importance of intellectualism and good character. Some of them read: “Excellence in learning and character” “Knowledge and sound judgement” etc. Schools no longer care about the character training. Their major concern today is how brilliant the students are, even when the students have got high marks through examination malpractice. There was a time in the country when universities would write to withdraw certificates already awarded from products that misrepresented the university in the Society, the age of such certificate notwithstanding. The school authorities and the entire teaching force have crucial roles to play in this respect. Learners should be taught and encouraged to be faithful in all they do. This way, they are most likely to show commitment to the ideals and philosophy of national identity.

Government should evolve means of encouraging faithfulness in our public life. Government workers who displayed exemplary faithful act(s) should be rewarded, while unfaithful acts should be sanctioned. The National Education Research and Development Council [NERDC] should as a matter of utmost urgency revisit the primary and secondary schools curricula with a view to making it positive – value oriented in content. The country should go back to the old system in which personal hygiene, folktales and moral education featured prominently in the primary school curriculum to teach morals.

Nigerians and non-Nigerians resident in, and/or doing business in Nigeria, must cooperate to make Nigeria a better place for all. In all our interactions, let us ask, in the words of Rotary International’s Four – Way test: Is it the truth? Is it fair to all concerned? Will it build goodwill and better friendships? Will it be beneficial to all concerned?

Together, let us build a culture of love for one another. Let us imbibe the virtues of faithfulness, hard work, kindness, piety, honesty, cooperation, humility, and modesty.
References


