Value and Practice Differences in Assessment for Learning

In

Nigerian Primary Schools

By

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A dissertation submitted in partial fulfilment of the requirements for

the degree

Master of Education

In

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Supervisor: Dr Surette van Staden

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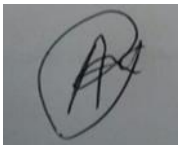
Declaration

I, Onuora-Oguno Blessing Oghenebrume, student number 17174432, hereby declare that the dissertation Value and Practice Differences *Assessment for Learning in International in Nigerian Primary Schools* is submitted in accordance with the requirements for the Master of Education degree at the University of Pretoria. I affirm that this dissertation is original and have not been submitted previously to any other institution of higher learning. All sources in this research, is acknowledged and indicated with a list of comprehensive references.



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Abstract

The study investigated teachers' formative assessment practice and the value they attach to formative assessment in primary schools in the Lagos and Kwara States of Nigeria. A total of 120 respondents were selected using the convenience sampling technique. Quantitative research methods formed the basis for analysis and data presentation. The inferential statistics used the Wilcoxon signed-rank test to analyse the data. The study surveyed possible differences in what teachers value and practice on five dimensions of assessment, namely Clarifying and Sharing Learning Intentions, Engineer Effective Classroom Discussion, Provide Feedback That Moves Students Forward, Activating Students as Instructional Resources for One Another and Activating Students as Owners of Their Own Learning.

In summary, the study revealed that despite overall positively valuing formative assessment strategies, most of the teachers did not practise formative assessment as they did not adopt the strategy of clarifying and sharing learning intentions as well as the criteria for success with their students. Results of the Wilcoxon signed-rank test showed that there is a statistically significant difference ($p<0.05$) between the teachers' practice and the value they assign to formative assessment in Nigerian primary schools. The study notes a high reliance on formative assessment principles by teachers in their daily teaching engagement. As gleaned from the results, the disparity between appreciation of the principles and their implementation remains an area that possibly require further investigation to improve on the level of understanding of the principles as well as their practice and appreciation.

Key Words: Education, Assessment for Leaning, Formative

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Dedication

This research is dedicated to God Almighty for giving me the strength and ability to push through with my Master's program. I also want to dedicate it to my darling husband, Dr. Azubike Onuora-Oguno, and to my lovely children, Ifunanya, Oghenetega, Ebube, and Munachisom.

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Ethical Clearance

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CLEARANCE CERTIFICATE	CLEARANCE NUMBER:	**SM 18/08/04**
DEGREE AND PROJECT	MEd Value and practice differences in Assessment for Learning in Nigerian primary schools	
INVESTIGATOR	Ms Blessing Onuora-Oguno	
DEPARTMENT	Science, Mathematics and Technology Education	
APPROVAL TO COMMENCE STUDY	25 February 2019	
DATE OF CLEARANCE CERTIFICATE	28 September 2020	

CHAIRPERSON OF ETHICS COMMITTEE: Prof Funke Omidire

CC Ms Bronwynne Swarts
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This Ethics Clearance Certificate should be read in conjunction with the Integrated Declaration Form (D08) which specifies details regarding:

Compliance with approved research protocol,
No significant changes,
Informed consent/assent,
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To whom it may concern,

I hereby confirm that I checked and edited the dissertation “Value and Practice Differences of Assessment for Learning in International in Nigerian Primary Schools” by Onuora-Oguno Blessing Oghenebrume for grammatical and typographical errors, style consistency and so forth, to the best of my ability.

Yours sincerely,

Salomé Smith
Lexica Language Services
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Table of Contents

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List of Tables

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List of Figures

List of Appendixes

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Acronyms

AfL	Assessment for Learning
ALIC	Assessment for Learning in International Contexts
ARB	Assessment Resource Bank
BECE	Basic Education Certificate Examination
CA	Continuous Assessment
CBAL	Cognitively Based Assessment of, for and as Learning
DFID	Department for International Development
FA	Formative Assessment
FAM-WATA	Formative Assessment Module of the Web-based Assessment and Test Analysis System
JSCE	Junior Secondary Certificate Examination
JSS	Junior Secondary School
KWSK	Knowing What Students Know
MDG	Millennium Development Goals
MLA	Measuring Learning Achievement
NERDC	Nigerian Education Research and Development Council
NCE	National Council on Education
NPE	National Policy on Education
NRC	National Research Council
SBA	School-Based Assessment
SPSS	Statistical Package for Social Sciences
STM	Science, Technology and Mathematics
UBEC	Universal Basic Education Commission
UK	United Kingdom
UNESCO	United Nations Education Scientific and Cultural Organization
UNICEF	United Nations International Children's Education Fund
UPE	Universal Primary Education
WAEC	West African Examination Council

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Chapter One:

Orientation of the Study

"Assessment for Learning (AfL) has been characterised as 'not a test but a process', focused on providing qualitative insights into student understanding. The process of seeking and interpreting evidence for use by students and their teachers to decide where the students are in their learning, where they need to go and how best to get there"

-Shaw, Johnson, and Warwick, (2013)

1.1 Introduction and Background

This research examines the differences in value and practice of formative assessment using Assessment for Learning in International Context (ALIC). According to Warwick, Shaw, and Johnson (2015), the reason of the ALIC project was to ascertain and advance knowledge regarding assessment practice and the value placed on implementing formative assessment among primary school teachers across different nations.

The research intends to find out to what extent teachers' value and implement formative assessment (FA) practice in Nigerian primary schools. It further seeks to investigate how formative assessment can be relied on to improve learning quality and teaching in primary school education. The study also intended to describe teachers' views regarding the application of formative assessment within the Nigerian primary school education sphere, using some selected primary schools in two states - Lagos and Kwara states in Nigeria. Boston (2002) posits that to appraise the effectiveness of students' learning, the appropriate assessment techniques and tools must be used during education cycle. In the Nigerian context, the National Policy on Education (NPC) provides that "assessment shall encompass the broad area of assessment for learning (AfL) and assessment of learning (AoL), both of which shall be used to accurately measure the ability of students and to improve learning" (NPC, 2013, p.45).

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More than three decades ago Fafuwa (1974) stated that education is a vehicle for social transformation, and the components of society are retained by passing knowledge from one cohort to another. Education as a concept holds the ability to transform the life of a child from poverty to a life of stability, giving such a child the chance of moving up the societal cadre. According to Mandela (1994, p.144), “Education is the great engine of personal development”. “It is through education that the daughter of a peasant can become a doctor; that the son of a mineworker can become the head of the mine; and that a child of farm workers can become the president of a great nation. It is what we make out of what we have, not what we are given, that separates one person from another”. Education is therefore laden with so much potential that it is only by ensuring that education is engaged efficiently that the required results will be achieved.

However, to actualise the above abilities of education, the impact of education on a student must be measured and its quality ascertained. Consequently, for education to transform students’ performance appropriately, transformation needs to be attained with the use of proper assessment techniques (Odili, Nenty, Adedoyin, & Major, 2007). While the use of assessment is understood to be a powerful instrument for knowledge, changes are required in the technique teachers use regarding the practice in the teaching process (Earl, 2006). Assessment is done to find out what the student has learnt during study as well as the personal development of the student (Idowu & Esere, 2009). For education to transform students’ performance appropriately, the basis for the investigation engaged in this study, it would provide stakeholders information to sustain the value of education and guarantee that it is maximised with the use of the right techniques in assessment.

Assessment from the education perspective is the way a student’s performance ability is determined, namely the affective, psychomotor, and cognitive domains (Awofala & Babajide, 2013). According to Rumbaugh (2014, p.30) “The cognitive domain deals with a student’s intellectual ability in how the student thinks and reasons; the psychomotor domain deals with the student’s use of the body as seen in sport and writing; and affective domain deals with the student’s attitude during the teaching and learning process”. Ensuring that the affective, psychomotor, and cognitive components of education are

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used adequately has great benefits in comprehensive assessment and determination of a student's ability.

Globally, the importance of education is being recognised more by the day. Various international organisations like the United Nations International Children's Education Fund (UNICEF) and The United Nations Education, Scientific and Cultural Organisation (UNESCO) are among the numerous bodies that champion the cause of education worldwide. The use of assessment techniques in the instruction period is a means of ensuring the quality of education is being assessed and evaluated (Onuora-Oguno, 2019). The importance of assessment is further brought to the fore by Earl (2003) by ensuring realisation of quality education. Consequently, the use of assessment is imperative because it allows students to know and appreciate their understanding and appreciation from the instruction they receive and allows teachers to make use of the information regarding student performance in a diagnostic way. Additionally, assessment provides immediate information for keeping records, offers evidence for reports, and directs efforts towards adaptation of instructional and curriculum designs.

Despite the importance of education and the acknowledged importance of assessment, numerous challenges continue to affect implementation and the maximisation of the benefits of education and assessment. This study therefore considers that one of the areas that need improvement in education is assessing the instruction methods used by teachers in schools. The instruction process needs to be improved because the purpose of assessment is primarily for improving learning and teaching methods, and not just for grading purposes. Assessment practices should be developed and refined so that they assist the student to learn efficiently and successfully (Antoniou & James, 2014; Dragemark, 2006; Earl, 2013). For student learning to be efficient and successful, continued development of the various forms of assessment needs to occur and be sustained.

According to Newstead (2004), assessment can have either formative or summative purposes. Formative assessment's major aim is to aid students by giving them feedback based on their performance, which will help the students learn and improve on their mistakes, while the implementation of assessment with a summative aim is to get the total

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score for the students' performance (Perera-Diltz & Moe, 2014). The traditional methods of assessment in the summative mode are now being complemented by different types of assessment, where students are involved in the appraisal of the learning (Odo, 2013). Assessment in a summative mode is the measurement done to evaluate the performance of one student in relation to another. In contrast, the formative mode is the standard mode primarily used to ensure that a specific competence has been achieved by the students (Newstead, 2004) before moving to a new set of work.

Earl (2006) posits that formative assessment is purposely done for the teachers to appreciates a student's strength, styles of learning and inabilities in order to know the next step to take for the teaching and learning style to be improved. According to Warwick et al., (2013), formative assessment is conducted to find out the position of the student while learning is going on and how to move forward with the instruction process. Formative assessment can help determine if the students have gained the desired outcome or not. It is however important to underscore the need for a swift improvement in "assessment for learning" (formative) to support "assessment of learning" (summative) (Perera-Diltz & Moe, 2014). Of importance is the need to enhance assessment for learning to support learning, since improvement in formative assessment will contribute greatly to the instruction period, and the students' learning abilities will also be improved (Wiliam, 2011). For purposes of this study, assessment for learning will be referred to as 'formative assessment' and assessment of learning will be referred to as 'summative assessment'. Furthermore, improving formative assessment requires changes in understanding for both the teachers and students and for them to have adjustments in attitude, value, and behaviour for formative assessment techniques to be fully effective.

1.2 Problem statement

The Nigeria education system adopts the summative system of evaluating students through a single examination used for promotion purposes (Elui & Studies, 2008). A new form of assessing students, "The Continuous Assessment" (CA) method came into place when the 6-3-3-4 education style was launched with the aspiration to find a positive resolution and lasting solution to the poor quality education and failure rate in Nigeria (Elui & Studies).

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The National Policy on Education (NPE) in Nigeria, Section 1, as revised in 2013 provides that “education assessment and evaluation shall be liberalised by being based in whole or in part on the continuous assessment of the progress of the individual” (NPE, 2013,p.ii; Idowu & Esere 2009,p.19). According to Idowu and Esere (2009), the above statement implies an essential perception of the implementation of assessment procedures in the Nigerian education sphere and should be embraced for proper implementation. Continuous assessment is the process used to evaluate the performance of students in through several school activities during the teaching and learning process (Elui & Studies, 2008).

Theoretically, teachers know about continuous assessment, as it is described in some educational textbooks. However, the problem is that teachers are generally not interested in its implementation (Osokoya & Odinko 2005; Awofala & Babajide, 2013). The challenge is further exacerbated in Nigeria because of the poor remuneration and work ethics of teachers (Onuora-Oguno, 2018). Further to the challenges, it is also noted that in Nigeria, teachers concentrate more on cognitive aspects of assessment, which possibly implies that some of the teachers do not comprehend the purpose of the assessment (Idowu & Esere, 2009). Another identifiable challenge is that many teachers do not receive the necessary training in school-based assessment, which includes continuous assessment (Awofala & Babajide, 2013). Emeka and Abe (2005) lamented that lack of continue capacity building for teaching limits effective implementation.

Some of the school- base assessment include teachers’ preparation in conducting exams, how to use different grading methods, how to construct different test items, and how to interpret and administer the scores (Adikwu et al., 2014). However, formative assessment is favoured as better suited for eliciting quality education and student performance. The use of continuous assessment technique has challenges that stand as barriers in the implementation process. Despite the challenges, CA is considered commendable and essential by the National Policy on Education in Nigeria (Adegbesan, 2011). With overpopulation in the classes, teachers have extra workload. Teachers therefore have limited time for the implementation of continuous assessment even when they have sound theory of the practice (Adegbesan, 2011; Adikwu et al., 2014). In addition, the same

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argument can be applied to the use of curriculum planning documents such as frameworks, sourcebooks, and syllabuses (Salau, 2016). Even though great importance is attached to those documents during the instruction period, more attention is focused on learning, gaining or acquisition of skills and concepts, as measured by summative examinations (Salau, 2016).

Curriculum planning is important as it affords a teacher a benchmark by which to measure the progress in learning targets and consequently, its assimilation by the students. It is noted, however, that a wrong approach to curriculum use in learning, places students' performance above their level of understanding (Marsh, 2007). For instance, teachers and students alike emphasise scoring highly on high-stake examinations (Idowu & Esere, 2009). It is therefore vital to dissuade the mind set of teachers, students and even parents from these short-term objectives and expectations. To dissuade the mind set of teachers, students and parents could be difficult to achieve because both journalists and parents continually confront teachers regarding the performance and pass rate of children as measured by summative assessments (Idowu & Esere, 2009). Generally, primary school teachers in Nigeria value and practise summative assessment more than formative assessment because the former provides better short-term results and outcomes. Thus, teachers prefer rote learning as conventional learning technique (Salau, 2016). Rote learning is defined as "the memorisation of information based on repetition" (Concordia, 2012, p.11). According to Oxford Learning dictionary, rote learning is characterised by cramming, which makes it the least effective learning process (Oxford, n.d). A significant downside of rote learning is that it whittles down creativity in students and intellectually stunts their growth (Concordia, 2012). Rote learning could be likened to summative assessment, as students are more interested in the final output (grades) as opposed to formative assessment, which seeks to constructively build the students' ability and enhance their performance.

Given that primary school teachers have difficulties in practising formative assessment due to some challenges such as a poor salary; inadequate training and skills; many of the teachers are not committed; and lack of awareness of formative assessment (Odo, 2013; Akem & Aduloju, 2013; Odili et al., 2007). A continued concentration on the need for

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quality education while neglecting the importance of teacher welfare is what has been described as “embracing the message but shooting the messenger” (Onuora-Oguno, 2018). Lack of attractive teacher welfare remains a huge demoralising factor among Nigerian teachers. Consequently, poor motivation among teachers inhibits the drive to learn new skills or even seek to implement already acquired skills. Past researches on the application of formative assessment have shown a small number of teachers consistently put formative assessment into practice (Ogunleye & Omolaye, 2016). Further, primary school teachers also lack responsiveness of the proper place of assessment practice in the classroom and misplace its value (Odili et al., 2007).

The concept of value represents preference of one concept above another (Erdem, 2007). Omeje and Eyo (2008) posit that:

> “Value is a philosophical concept which is supposed and can influence people and make them do things which ordinarily they will not do. Value is an underlying factor in the concept of choice; it is as intrinsic to human beings as rationality; it determines what is cherished or refused; and it decides what is rejected or accepted. Values are very important in human life because values are closely related to the preferences of individuals. In this sense, choices made by individuals are reflections of the values that they have attach to those things. Value is a wide concept, which involves basic beliefs and principles” (Omeje & Eyo, 2008, p. 154).

Based on the Omeje and Eyo interpretation, the value a teacher attaches to assessment will determine to what extent the teacher will adopt and practise formative assessment. Hence, value and practice are interrelated, as what a teacher values are what the teacher will practise (Halstead & Taylor, 2000). The intensity of our values guides our actions. Some thoughts, actions and how we perceive things are not questioned but rooted in our fundamental values, which can be difficult to turn from (Halstead & Taylor, 2000). Imperatively, ensuring that teachers are made to have strong positive values for formative assessment is instrumental for realising the potential of education and assessment. Teachers’ strong positive value towards the use of formative assessment would ensure that teaching methods are implemented on the participatory system of teaching by

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applying the play method and motivation to aid the assessment of affective behaviour; the psychomotor domain, where students are subjected to performance tests; or the cognitive domain, where students are assessed in different ways due to the task given such as in oral or written tests, counting and recalling (Elui & Studies, 2008). The perceived link between teachers' value and practice for assessment and learning in Nigeria primary schools is the fundamental motivation for this research.

Primary schools in Nigeria are generally in poor condition, with worrisome indices. Some of the identified factors responsible for the worrisome indices include the following:

Insufficient and inadequate facilities or tools

Many Nigerian primary school teachers do not have access to simple facilities such as "computers, diaries, notebooks, textbooks, libraries, registers, standardised tests, steel cabinets, flash drives, and report booklets necessary for efficient implementation of assessment" (Elui & Studies, 2008,p.4).

Ineffective allocation of available resources

Most primary schools lack necessary resources, properly equipped classrooms, and a favourable environment for successful implementation of assessment (Adikwu, Obinne & Amali, 2014).

Lack of government commitment

The government does not provide adequate human and materials resources that would enable teachers to carry out their duties properly (Odia & Omofonmwan, 2007). Grants are not given for the procurement of standardised instruments, like computers, flash drives, report booklets and so forth, which are meant for the enhancement of successful learning and teaching (Elui & Studies, 2008).

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Incompetent teachers

Teachers are not given proper training regarding assessment. Limited attendance of seminars and workshops by teachers gives rise to limited dedication and commitment by teachers to effectively implement assessment (Edinyang, Opoh & Odey2014). Teachers do not keep proper records of students' cumulative performance. Low performance and mass failure in Nigerian primary schools are rampant because most teachers lack knowledge and adequate guidance on the application of assessment (Ogunleye & Omolayo, 2016).

Poor funding

Teachers' incentives in the form of salaries are not regular and enhanced, which makes teachers less committed to carrying out their duties properly during the instruction and learning period (Elui & Studies, 2008). "The neglect for funding is pathetic for a nation that wants to grow" (Adikwu et al., 2014, p. 222).

Untrained teachers

Inadequate training opportunities on the use of assessment by teachers presents a huge challenge for the education system (Osokoya & Odinko, 2005). The NPE stipulates that the teacher to student ratio must be 1:35 (NPE, 2013). However, schools in Nigeria hardly adhere to the rules and the stipulation made by the NPE because they have to accommodate more students due to lack of teaching staff and the rising number of students (Ogunleye & Omolayo, 2016). Poor adherence could be attributed to the desire by most schools to take in more students to collect more fees to take care of teachers' salaries and facility maintenance. According to Osokoya and Odinko (2005), various researchers have argued that the 6-3-3-4 model of education is responsible for the poor functioning of the education in Nigeria. As earlier stated, the poor performance of schools, though linked to numerous factors, is also attributable to poor infrastructure and content; inadequate teaching time due to high teacher to student ratio; the use of unqualified teachers; and lack of awareness on assessment application (Edinyang et al., 2014).

In addition, Onuora-Oguno (2018) identifies poor policy implementation and understanding of the curriculum as a basis for the poor quality of education in Nigeria. At

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the primary school, it is normal for students to be open to the elements of formative assessment, and teachers teaching them should also be knowledgeable. Unfortunately, most teachers are not well informed on the implementation of formative assessment practice, value, and practice. Factors responsible for this situation range from a policy vacuum to religious, cultural, and institutional deficiencies (Osokoya & Odinko, 2005). The situation is exacerbated by the fact that many of the teachers have base understanding on the interpretation and implementation of formative assessment (Elui & Studies, 2008).

1.3 Rationale for the Study

Improving learning outcomes and the quality of education is the main rationale for carrying out this study. Another justification for embarking on the research is to advocate for the use of formative assessment value and practice at primary schools in Nigeria, as it could influence learning outcomes positively. The researcher's four-year working experience in the basic education sector in Nigeria has significantly boosted the researcher's passion for quality education in the country. The researcher has attained the position of a head teacher and held an administrative post over the course of teaching at the primary school. What prompted the researcher to carry out this research follows from the observation that teachers do not assess students properly in line with the procedures of assessment during teaching. Furthermore, the researcher discovered that summative assessment practices are preferred because they are less stressful, and teachers do not devote time to assess students continuously. These experiences on teachers' attitudes to formative assessment serve as the impetus for the present study with a view to investigating how formative assessment practice is being practised and valued by the teachers teaching in Nigerian primary schools. Dorn (2010) remarks that formative assessment is attractive. The value teachers place on a teaching method will determine whether they will practise it.

The rationale of the study is based on the premise that if formative assessment is valued, as well as implemented and practised in primary school in Nigeria, it would enhance the quality of teaching. In the researcher's expectation, this work would open further academic research that would be very useful to both teachers and students in Nigeria.

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With this study, formative assessment could be more effectively used to improve the students' pass rate and facilitate better understanding and performance in their evaluation. Formative assessment would also enhance student inspiration, desire, and aspiration, and enable them to use the knowledge gained from real-life situations. The research would also improve teachers' use of formative assessment and provide evidence to evaluate the students' progress all through the year, rather than through once-off tests, which do not fully capture the progress or the challenges the learners are facing. Formative assessment implementation is ideal but currently there exists a difference between what is highly valued and what is practised in respect of formative assessment in Nigeria primary schools.

In as much as the use of formative assessment has been in use for a long period, most primary school teachers do not have much knowledge of it and its implementation. While accepting that the implementation might be problematic in a Nigerian context due to the challenges facing the practice, it could be designed to adapt to situations at different places to enhance quality in education and the learning process. Furthermore, formative assessment implementation would, in the long run, impact on environmental issues and resources, both human and material, to be well equipped and utilised. It is hoped that formative assessment could also inform a much-needed revitalisation required in Nigerian primary schools and will encourage the practice of recent assessment practices to make them even more practical and successful.

1.4 Research Purpose

This research investigates the differences in the perception of formative assessment value and the practice assigned to it by primary school teachers in Nigeria. It discusses the value and practice by teachers of formative assessment and offers strategies for bridging the gaps (if any) or sustaining the positive points in teachers' assessment value and practices. The research also aims at bringing to the fore the guiding principle of formative assessment as it affects schools for the benefit of policy makers, the community and society at large. The study will also offer suggestions and possible recommendations on the value and practice of formative assessment.

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1.5 Research Questions

The core question that informs this research is:

How do teachers practise and value the use of formative assessment?

The following sub-questions derive the main question.

i. To what extent do teachers practise formative assessment in Nigerian primary schools?
ii. How do teachers' value formative assessment practice in Nigerian primary schools?
iii. Are there any statistically significant differences between teachers' practice and the value they assign to formative assessment?

1.6 Formative Assessment

According to Garrison and Ehringhaus (2007), assessments exist in several forms. However, the mainly discussed forms of assessment are formative and summative assessments with formative assessment chosen as the focus of this study. Looney (2011) posits that summative assessment is mainly carried out after teaching to know what the student has gained and not gained after the course of instruction. Summative assessment is used after the instruction has taken place to test students' performance and ability to assign a grade (Adikwu et al., 2014; Earl, 2006). Formative assessment is used to help adjust the instruction process with the information gained from the assessment (Garrison & Ehringhaus, 2007). It is noted that improvement of student's performance and involvement in learning process can be achieved with the effective deployment of formative assessment during learning (Black & Wiliam, 2009). According to UNICEF, assessment is instructive as it helps to keep an eye on the knowledge gained by the student and feeds back into instruction process (UNICEF, 2019). This research therefore focuses usage of formative assessment by teachers and the attendant benefits to both teachers and learners.

The implementation of formative assessment during the teaching and learning process is divided into tiny units for instruction (Marshall and William, 2004). Each unit has specific

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objectives before the administration of summative tests on the completion of all the units (Hlavatý & Dömeová, 2014; Marshall &William, 2004; Marzano & Haystead, 2008). The benefit of using formative assessment is that students can participate more in the teaching and learning process because of the splitting of the subject into smaller units and modules, which makes their learning and performance more feasible (Marshall & Willam, 2004).

One of the integral parts of formative assessment practice is the involvement of the student during the learning and teaching process (Garrison & Ehringhaus, 2007). Further, formative assessment raises the level of student performance generally (Marshall &William, 2004; Marzano & Haystead, 2008). Formative assessment is also an essential element in acquiring knowledge, the progression of students, and a fundamental aspect of classroom assessment practices (Earl, 2006). Formative assessment is a "process through which assessment-elicited evidence of student learning is gathered and instruction is modified in response to feedback" (Cauley & Macmillan, 2010, pg1). Formative assessment is said to have formative functions when it can assist teachers to advance on the method of instruction and help students to work on their learning abilities and styles (Black & Wiliam, 2009). With the effective use of formative assessment, the teachers and the students can recognise and also take action concerning the students' learning in order to make sure the students are making progress during the instruction process (Bell & Cowie). For the development and standard of learning to improve, efficient communication between the teachers and students is essential. Therefore, efficient implementation of formative assessment is necessary for the purpose of learning to be fully achieved (Florez & Sammons, 2013).

Regrettably, teachers do not use formative assessment consistently but rather focus extensively on summative assessments, such as "weekly quizzes, chapter tests, annual state-mandated tests, the national examinations such as the West African Examination Council (WAEC) examinations, and other standardised tests" (Elui & Studies, 2008, p.6). Such summative assessments impact less on improving students' learning because they minimally influence teachers' practice (Heritage, 2008). For instance, in there is a gap from the way in which teachers and students engage with the learning process, with

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students trying to memorise questions and answers (Elui & Studies, 2008). The attention given to just pass an examination and obtain good results and degree certificates has led to a negative aspiration and devoid of a good requisite knowledge. The desire to pass is why students cheat in examinations and tests by copying from textbooks or from a brighter student (Elui & Studies, 2008). Teachers, on their part, find it difficult to assess students during the teaching and learning process to enable them to identify the students' strengths, learning styles, abilities, attitudes and challenges or potential misconceptions that can be taken care of by using different teaching methods (Adikwu et al., 2014).

Experience with my daughter in junior secondary school (JSS) showed that one day she came back from school for me to discover that her mathematics classwork was not assessed or graded by the teacher. A careful look even showed she did not do the work right. The failure to correct students' work and give them feedback have led to mass failures in mathematics reported in that class. When the mathematics teacher was confronted, the excuse he/she gave was that there were many other classes to teach; there was insufficient time to mark students' work; and no time for prompt feedback or correction. Failure to give feedback to students on their improvement in the instruction process will lead to lack of motivation to learn and derail effort to make adjustments (Adikwu et al., 2014). This system of instruction and learning could result in national underdevelopment or a dreaded disaster (Elui & Studies, 2008). Since teachers do not use formative assessment in assessing the students, there could be difficulties in correcting the mistakes students make during the instruction process (Adikwu et al., 2014).

At all stages, it is encouraged that the learning and teaching should reflect usage of formative assessment (Gareis & Grant, 2015). Every teacher should make use of formative assessment daily because it gets the students involved in the activities during the teaching process. Formative assessment can influence the students' progress in learning; expand their level of thinking; and has the power to make students reach their set goals (Heritage, 2008). Formative assessment provides swift response to both teachers and students, emphasises strengths, identifies challenges, and points to the next steps (Paul, Warwick, Stuart, & Martin, 2014). Formative assessment motivates

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students to be involved with teaching and learning process and takes responsibility for students' own knowledge, better performance as well as their academic improvement (Dixson & Worrell, 2016).

Formative assessment, according to Earl (2006), is an evaluation that is a continuous procedure integrated into the instruction process activities with the intention of encouraging daily student-teacher interaction. For quality learning and teaching to be achieved in Nigeria, there is need for both students and teachers to adopt formative assessment in Nigerian primary schools.

Formative feedback helps teachers use the information from the feedback to make informed and key adjustments where students are having difficulties and when they are progressing (Boston, 2002). Formative assessment is a systematic process used continuously when teaching and learning are in progress, and it contrasts with summative assessment, which is mostly used once-off in a session with the sole aim of allocating grades (Adikwu et al., 2014). The advantage of formative assessment is that it develops students' capacity and aids self-motivation (Gareis & Grant, 2015). An on-going assessment is achieved in the learning process by applying formative assessment during the instruction period (Perera-Diltz & Moe, 2014). Formative assessment has many benefits as it aims at mastery learning, which is an essential strategy for imparting knowledge. In addition, improvement of study habits; setting of goals and criteria towards measuring performance; and quality responses from the teachers are significant highlights of formative assessment (Spiller, 2009).

1.6.1 Clarification of Concepts

Globally, "education is defined as one of the veritable and potent instruments for change and transformation in the socio-political, scientific and technological spheres of every nation" (Edinyang et al., 2014, p. 2).Assessment is said to be a fundamental factor of the instruction process (Perera-Diltz & Moe, 2014). Assessment for learning is "the process of seeking and interpreting evidence for use by students and their teachers to decide where the students are in their learning, where they need to go, and how best to get there"(James & Pedder, 2006, p. 110).

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Assessment of learning is defined as the assessment that is utilised to back up what the student has gained during the instruction, and to determine if the student has met with the desired learning outcome or not (Earl, 2006).

Formative assessment is defined as a continuous process used during the learning and teaching time to improve the information collected to make adjustments (Perry, 2013). It is also used to correct student misconceptions through feedback.

“Summative assessment is the assessment that is carried out after” the instruction period to convey student progress (Earl, 2006, p.4). “Summative assessment uses data to assess about how much a student knows or has retained at the completion of a learning sequence” (Dixson and Worrell, 2016, p.153).

1.7 The Nigeria Educational System

According to Nwonwu (2008) primary education is compulsory for all school age children across the world irrespective of their gender. The Nigerian educational system operates a National Policy on Education (NPE) that is represented as the 6-3-3-4 system of education (Nwagwu, 2010). The “NPE is the national guideline for the effective implementation, administration and management of education at all tiers of government in Nigeria” (NPE, 2013, p.ii). The 6-3-3-4 Nigerian education system is made up of six years of primary education, three years each of junior and senior secondary school, and four years of higher education (Babafemi, 1999). Children between the age range of six to eleven are in primary school level of education institutions in Nigeria, which is also seen as the basis of all the other levels of education (Babafemi, 1999). According to the NPE, primary education is to be supplied by the Government and shall be compulsory, free, universal and qualitative (NPE, 2013, p.4).

The objectives of primary school level education in Nigeria, according to Nakpodia (2011) are:

- Encourage permanent literacy and numeracy.
- Develop the ability to communicate effectively.
- Lay a sound basis for scientific, critical, and reflective thinking.

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- Develop basic skills for scientific and reflective thinking.
- Develop basic skills for trades and crafts (NPE, 2013.

In pursuance of these objectives, the curriculum for primary education covers most of the subjects that Nigerian children will be exposed to during future education (NPE, 2013). According to UNICEF, “Primary education, which is also called the elementary education, is designed for children in kindergarten through sixth grade. Primary education provides students with a basic understanding of various subjects as well as the skills they will use throughout their lives” (UNICEF, 2019).The concept of primary education as a basis for a lifelong learning skill acquisition makes it imperative that teachers at this level are well versed in assessment techniques, as primary education would prepare students for better life and societal impact.

Despite the seemingly laudable educational system of Nigeria and the importance of the primary school, the state remains worrisome in terms of access and quality (Momoh & Ogonor, 2014). Data from UNICEF shows that the “world missed the Millennium Development Goal (MDG) of achieving universal primary education (UPE) by 2015”. (MDG, 2015, p.60). Worldwide, it was shown that 91% of primary school age children were enrolled in schools in 2015 (UNICEF, 2019). Generally, “there is still a long way to go before achieving UPE in some regions. The challenge is most acute in Sub-Saharan Africa, where the net enrolment rate stood at 79% in 2015” (UNICEF, 2019). For instance, Nigeria in recent times has made headlines for negative indices in the education sphere, and there are also indications that Nigerian children at the primary education level perform poorly (Olatunde, 2003; World Bank 2004; Universal Basic Education Commission, 2005). For instance, Nigeria is among the countries in sub-Sahara Africa that have very high percentage of children that are not in school, a low school completion rate and poor quality of education generally (UNESCO, 2000). In addition, a measuring learning achievement (MLA) study that was carried out in sub-Saharan Africa and North Africa countries by UNICEF in 2003 shows that school children at the primary level of education in Nigeria were ranked lowest, with national mean scores of 30% compared with their counterparts from Tunisia, who had the highest mean score of 70%, followed by those

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from Mali with 50.8% (World Bank, 2004; Nbina, 2011). Furthermore, it is on record that the Universal Basic Education Commission (UBEC) also conducted a national study in 2001 and 2003 in four core subjects - Mathematics, English Language, Social Studies and Primary Science at primaries 6, 5 and 4 classes and only one out of five students that participated obtained above 30% in the examination, while in the 2001 results only one percent of the students who participated was able to answer half of the examination questions correctly (Umar 2006, p.777; World Bank, 2004). In addition, the 2003 result also showed the same trend, with the mean score below 40% for the four subjects (World Bank, 2004). The extent of the problem necessitated the UBEC to create a plan to do nationwide training of primary school teachers on primary school curriculum interpretation in 2008.

The core purpose of the training was to seek solutions to the problem of underachievement by Nigerian children in primary schools (UBEC, 2005). In addition to the survey that was conducted by UBEC, UNICEF went further to determine the factors that may be causing poor performance of students (World Bank, 2004). The major contributing factors, as identified by UNICEF (2001) in Nigeria, include poor classroom conditions, inadequate distribution of essential textbooks and other instructional materials as well as poor teacher preparation. Primary school teachers' perception of classroom assessment is said to be weak and vague (Odili et al., 2007). The situation remains the same at present, as the numerous challenges identified, which affect the Nigerian primary education system, continue to loom large (Onuora-Oguno,2019; UNICEF, 2001).

According to Odo (2013), assessment is an instrument used to grade a student in the psychomotor, affective, and cognitive domains in a logical way to determine the performance of the student while learning. Furthermore, Odo (2013) indicates that the students should be evaluated in the three domains, but that assessment should not be based entirely on these domains. The focus of the Nigerian National Policy on Education is to continually evaluate the behaviour in psychomotor, cognitive and affective domains in students, and learning to keep a record of their progress in order to make valid judgement (Osadebe, 2013). The record regarding the performance in the affective, cognitive, and psychomotor domains of the student should be used to continuously guide

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the student for improvement (Osadebe, 2013b). Before the establishment of continuous assessment in Nigeria's basic education in1977, following the adoption of the National Policy on Education, student appraisal was done on a termly basis, which was generally conducted at the end of the school calendar year (Osedebe & Abel, 2018). The use of continuous assessment in schools, observation continues to show that there are some challenges that hinder its effective application in primary schools (Odili et al., 2007). Awofala and Babajide (2013) posits that the "reintroduction of the universal basic education (UBE) programme and the expansion of its scope from six years to nine-year basic education in 1999 brought a new dimension to continuous assessment in the form of school-based assessment (SBA), otherwise called assessment for learning assessment for learning at the primary and junior secondary school levels of education in Nigeria". The Federal Government set up the Universal Basic Education purposely for policy coordination and monitoring (NPE, 2013).

The Nigerian Education Research and Development Council (NERDC) saw that there was a need for the School-Based Assessment to develop the validity and reliability of students' assessment because it is provided different means of appraisal and approach, monitoring and evaluation of students' for extended periods (Awofola & Babajide, 2013). The School-Based Assessment's intention was also to provide an advanced and reliable suggestion regarding the capabilities of students rather than their performance based on a once-off test (Osadebe & Abel, 2018). The School-Based Assessment in Nigeria was reinforced by the introduction of the nine-year basic education curriculum, which brought about the motivation for the Nigerian National Council on Education to endorse a new framework for carrying out student appraisals in schools, of which continuous assessment is a part (Awofola & Babajide, 2013).

1.8 Methodology and Data Collection Instrument

This study adopts research design and methodology to investigate ALIC in Nigerian primary schools; practise and value formative assessment usage. The ALIC project was meant to determine the knowledge of assessment practice and the value placed on implementing formative assessment in the classroom among primary school teachers across different nations (Warwick et al., 2015). The survey was carried out in non-

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Western countries, which included Nigeria, and was administered to teachers to determine the gaps between teachers' value and practice systems and to find out if they had comparable outcomes with the assessment practice survey that was carried out in England (Warwick et al., 2015). The Learning how to Learn Project also surveyed 558 teachers in England to examine the issue of value and practice in the UK, and possible gaps between the two (Warwick et al., 2015). Consequently, this study adopted the use of the ALIC questionnaire as the instrument that was used in the UK research. The study employed the devised survey items by James and Pedder (2006) to collect data in the Nigerian context. The survey items were used to gather data on teachers' value and practice of formative assessment implementation in classrooms (Warwick et al., 2015, p. 39). The researcher considered the use of a questionnaire appropriate because it is generally a less expensive method with which to collect data when compared to other methods. Furthermore, quick data collection is supported (Nemeto & Beglar, 2014).

The research adopted a survey research technique in designing the study; a purposive sampling method to identify schools and teachers interviewed; a structured questionnaire to collect data; and a quantitative research technique, using descriptive and inferential statistics to analyse and present the data. The research questions are designed to investigate teachers' views on the implementation of formative assessment in primary schools in Nigeria. Specifically, the interface between teachers' value and practice of formative assessment was investigated using samples of teachers in selected primary schools in Lagos and Kwara States of Nigeria. In total, 120 teachers from 11 primary schools were selected in the two states.

1.9 Overview of the Study

Chapter One consists of the introduction and background; the problem statement and rationale; definitions of formative and summative assessments; and the research methodology and data collection instrument.

In Chapter Two, review of existing literature is extensively attempted. The chapter also looks at the theory of assessment, the history of assessment, and the Nigerian policy on assessment as well as the problems facing assessment practice globally. Chapter Two

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further discusses the impact and difference between formative and summative assessment and the conceptual framework that underpin the research.

In Chapter Three, the design, and the method of the research as well as the instrument and method of sampling used are discussed. Chapter Three also looks at the issues of validity and reliability, the analysis of the data and the ethical considerations.

Chapter Four focuses on analysis of data and the interpretation of the results while Chapter Five makes summary of the findings, recommendations, and conclusions.

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Chapter Two:

Literature Review and the Conceptual Framework

"It has become universally mandatory that every child of school age - irrespective of gender - should go to school and receive at least a primary education"

-. Nwonwu (2008)

2.1 Introduction

Chapter Two examines existing literature on formative assessment. The study will, however, begin by examining literature that deals with the concept of assessment generally in Section 2.2. The study also discusses the history of assessment, the Nigerian policy regarding assessment, and Nigerian primary schools' practise of assessment in Section 2.3. Additionally, this chapter also looks at various forms of assessment and draws a differences between formative and summative assessment techniques in Section 2.4 based on reviewed literature. It further discusses formative assessment concepts in Section 2.5, and formative assessment purposes in Section 2.6. Teachers' practice of and the value they assign to assessment are discussed in Section 2.7. Furthermore, the research looks at the impact of practising formative assessment during the instruction process, and some challenges facing formative assessment and some of the empirical studies in Africa are presented in Section 2.8. The conceptual framework that underpins this research is discussed in Section 2.9; and finally, the last section offers an appraisal of the literature reviewed.

It is important to reiterate that to accomplish educational objectives and aims, the assessment of students in the school is crucial. Assessment of one type or the other is a prerequisite because one of the functions of a school is to give certificates to its students for successfully carrying out its goals and aims (Osadebe & Abel, 2018). Generally, assessment is done by the teachers to get information to modify the instruction process (Wiliam, 2009). Assessment encompasses those activities and techniques, or tools teachers use to assist students to learn and to determine students' improvement and performance during teaching (Earl, 2013). Furthermore, assessment is seen as an

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instrument to gauge the progress of a student (Wiliam, 2011). Assessment is carried out by teachers to know what the student understood and can do (Kanjee, 2009). Van Staden and Motsamai (2017, p. 1) claim that "assessment is at the heart of the teaching and learning process". An assessment technique also allows nations, society at large and individuals to follow the educational administrative systems to improve school quality (Braun, Kanjee, Bettinger & Kremer, 2006).

> According to Benson (2004, p.4), the "A" word, assessment, immediately brings to mind tests, quizzes, assignments, grading, performance standards, student evaluations, class evaluations, and programme (curriculum) evaluation. Assessment seldom conjures up the personal joys and rewards of successful teaching and, student learning".

However, this research seeks to unpack the use of the "A" words as conceptualised generally by Benson (2004) above and provides a context on which teachers are encouraged to make value choices towards greater realisation of the benefits of education and assessment.

2.2 Concept of Assessment

Nwagwu (2010) conceptualises assessment as a procedure that involves many activities, both formal and informal short tests, including external examination. Assessment is also an on-going process, a fundamental aspect of the instruction process, which aims at evaluating the students' skills, attitude and understanding appropriately (Van Staden & Bosker, 2011). Teachers incorporate assessment into their instruction process to identify how well students are coping with the lesson and the action teachers need to follow for further enhancement and development of both the teaching and learning process (Gardner, Harlen, Hayward& Stobart, 2008). Teachers obtain information about the attitude, skills, and knowledge of students by applying assessment in the classroom to improve the instruction process (Sayed, Kanjee & Rao, 2014). Assessment also involves teachers' effort to deliberately measure the learning and teaching process and how school learning affects the students' behaviour in all aspects of learning (Osadebe & Abel, 2018).

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Assessment of teaching and learning refers to rational observation and abstraction of data concerning teaching and learning performances across subjects, classes, and programmes (and this can extend up to the various arms of the schooling structure and countries) over time. It also includes the direction of understanding, the trends in the quality of the instruction process, the predisposing factors, and steps necessary to achieve and sustain optimal performance in teaching and learning (Nwokeocha, 2014). According to the United Kingdom Department for International Development (DFID 2012), assessment of student achievement "entails the measurement of learning, analysis to diagnose problems, and use of the findings to guide remedial action". The DFID (2012) further defines a national assessment as "a survey of schools and students (and sometimes teachers) that is designed to provide evidence, at the level of the education system, about students' achievement at a particular stage of education, in identified curriculum areas (e.g., reading or literacy, mathematics or numeracy, science)".

> According to the Nigeria Federal Ministry of Education (1980) assessment is "a method of ascertaining what a student gains from schooling in terms of knowledge, skills, industry, and character development, taking account of all his or her performance in tests, assignments, projects and other school activities during a given period and using his or her recorded performance to help improve learning by identifying and remedying areas of difficulties in the learning" (Elui & Studies, 2008).

The certificate given to students at the completion of any education programme is a major function of all levels of education institutions (Osadebe & Abel, 2018). Educational assessment is the approach in which the interest, knowledge, skills and attitude of the student are achieved by grading or scoring through the educational programme (DFID, 2012).The assessment of students' skill and knowledge is an imperative aspect of the schooling system (Elliot et al., 2000). Therefore, educational assessment is said to be an

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essential factor in the education system (Osadebe & Abel, 2018). The functions of the educational assessment practice determine whether the objectives and goals of education have been met (Elliot et al., 2000). Educational assessment provides feedback on a student's performance in a systematic way and improves the quality of the instruction process. (Obioma et al., 2013). Therefore, assessment is a continuous means to obtain information regarding student strength, skills, and attitude to make decisions and judgements about the adequacy of the curriculum efficiency as well as to notify policymakers (Kellanghan & Greaney, 2001).

According to Okonkwo (2006), assessment means the level to gauge students' learning and give judgement on their performance. Naghdipour (2017, p.283) posits that "assessments are the activities undertaken by teachers and their students in evaluating themselves". Assessment is the process of determining to what length the objectives and purposes of learning are realised. Since the purpose of teaching is to produce desired changes in students, whenever a teacher or an assessor decides on what changes are desirable and how best to achieve them, they are thus engaged in assessment (Nwagwu, 2010). Further, "the aim of assessment as an agent of transformation is not only as an instrument against which progression is unrushed, but rather serves as evidence for progress in achieving the intended learning outcomes, and to identify areas for student support or further intervention" (Van Staden & Bosker, 2011, p.1). Assessment also covers regularly marked course work, assignments and periodic tests that form part of a course. Benson (2004) defines assessment as the comprehensive gathering of information used in determining student progress by the teacher.

The National Research Council (NRC) (2001) claims that educational assessment is a tool that is indispensable to the student, teacher, and educational system. In addition, the Council views educational assessment as a social intervention that aids and guides a programme through the planning and implementation stages and continues to intervene in the outcome stages. Further, educational assessment is a procedure that monitors a programme to attain the desired goals (NRC, 2001). Elui and Studies (2008) claim that education assessment helps to evaluates students' progress. The authors further submit

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that assessment helps to improve the technique applied by teachers in their teaching, which further encourages students' thoughts and actions. Assessment also allows students ask questions and motivates them to learn as they go through the learning processes.

Assessment is the process whereby teachers use different techniques to teach, such as observing the students' skills in solving problems; observing the behaviour and character that might hinder or promote learning; and listening to the students' questions or answers to questions; all of which help the teacher adjust the teaching method and take care of any misconception (Elui & Studies, 2008). The teacher's approach on handling the different assessment techniques will determine if the teacher needs to slow down or move ahead as well as check if the concept taught has been mastered by the (Elui & Studies).

Assessment procedures are means adopted in determining the level to which the lesson imparted to the students is effective or whether the teacher has imparted the lesson effectively in line with the objective (or goals) set (Abodunrin,1999). Abodunrin (1999) further posits that assessment incorporates the diagnosis of a student's problems using measurement and non-measurement means plus value judgment. Where value judgement, according to the Cambridge dictionary, is a declaration about how bad or well something is thought of, based on opinion rather than fact. The Collins English dictionary defines value judgment as subjective assessment based on one personal code of value or that of one's class. Stephen Finlay (2004, p.9) states that "value judgements are factual statements, which are true or false depending on their correspondence". Generally, assessment is to be taken into cognisance that curriculum content influences all aspects of society's productivity and excellence (Oyekan, 2000). The position of Oyekan lends credence to the perspective on the need for a proper and relevant assessment technique to be adopted for greater efficiency in Nigerian primary education. Thus, the use of a proper assessment technique helps the student to build quality value judgements that are useful in everyday operations and the expectation from both the student and society in general. The function of assessment shows that the proper use of assessment techniques is a quality control component in the progress of student achievement. In the view of

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Oyinloye and Imenda (2019), assessment is pivotal style of teaching, and it highlights an important function when it comes to the instruction process (Earl, 2006; Van Staden & Bosker, 2014). Zou (2008) believes that assessment has numerous functions, which include the motivation of student learning; provision of feedback regarding student weaknesses; checking if the students are where they are supposed to be; and providing the teachers with information about students' progress.

In general, assessment is an indispensable component of the educational system owing to the critical diagnostic, motivational, guidance, judgmental, confirmatory, and other roles that it plays in educational context (Gareis & Grant, 2015). Academic success can only be determined by some basic concepts that are connected to educational assessment such as tests, testing, measurement, and judgment (Warwick et al., 2014). Assessment is thus the foundation of strong inspiration that provides feedback to the learner and instructor as well as the other relevant bodies in the educational system, regarding the progress of the student (Owolabi, 2004). Feedback is a fundamental element of assessment, which enables the students and teachers to improve on their performance, identifies gaps, and builds towards filling such gaps for better performance (Wiliam, 2011). It could be inferred that to achieve a better performance from the teacher and student as well as produce an effective quality education.

The position above is strengthened by the assumption that a test is a task or assignment given to elicit the behaviour or attitude of persons or things with a view to determining or drawing inferences about specific abilities or other attributes of those persons or things respectively (Benson 2004). On the other hand, an assessment may be described as an act or process of assessing or appraising something and expressing an opinion on its quantity, quality or worth (Gareis & Grant, 2015). Thus, a test is an instrument for making some measurements, and when judgement is passed regarding the quality or worth of the attributes, whether based on measurements or not, it is said to be assessment (Gareis & Grant, 2015). Students' achievements in school are assessed for categorisation, admission, diagnostic assessment, placement, promotion, selection, and certification, among others (Kane & Bejar, 2014).

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2.3 History of Assessments

Assessment initiatives, according to Earl (2006) have been in use for a very long time. “The term ‘assess’ is derived from the Latin word ‘asoidere’ meaning”, “to sit by in judgment” (Okonkwo, 2006, p.2). In Okonkwo’s view, assessment includes the activities teachers engaged in that determine what the students have acquired while learning. Educational institutions started using both “summative and formative assessment” in early 1970s as primary evaluation techniques to assess students in the classroom (Earl, 2006).

Recently, the approach most teachers use regarding assessment practice has moved from just grading the students at the end of the instruction to providing opportunities to improve the learning and teaching process (Brian, 2010). Biggs (1996) claims that the connection between the content knowledge, teaching method and learning is seen as the bedrock for the authenticity of assessment. Biggs (1996) further posit that the alliance between teaching, learning, and the content knowledge should be given attention.

According to Broadfoot and Black, (2004) 1993 heralded the birth of a novel international journal which had a major focus on “Assessment in Education: principles, policy, and practice”. The assessment in educational journal was created purposely to establish an avenue for an academic debate regarding the assessment practice, principles, and policy globally because it is a paramount development in educational assessment (Broadfoot & Black, 2004). The teams that established the international journal are group of academicians from the Graduate School of Education, University of Bristol, United Kingdom. (Broadfoot & Black, 2004). Further, bearing in mind that the rapid growth educational assessment; the unavailability of a voice given to communicate or spread the needed capacity regarding the international research in assessment in particular was a major error or an oversight (Broadfoot & Black, 2004). Thus, “posing difficult to the growth of immense global perception and awareness regarding the strong influence of different forms of assessment on educational practice policy, plans to sustain and achieve the aims and objectives it was meant for had to be made” (Broadfoot & Black, 2004, p.10). Earl (2006) attests to the history and affirmed that assessment is fundamental in learning.

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The knowledge that assessment has been used for long however, does not alter that the technical concept of assessment for learning is a more recent occurrence (Earl 2006).

Assessment for learning practice is designed purposely to improve the learning of students (Wiliam, 2011). Brandom, Carmichael, and Marshall (2005) posit that the modern usage and practice of assessment for learning further find credence in the work of the Assessment Reform Group, (James, 2011). The distinction between assessment *of* learning and assessment *for* learning is found in the concept of the latter dealing with evaluation of lessons learnt, and the former with further evaluation to influence future teaching processes (Gipps, 1994; Dixson & Worrell, 2016). The nuance of identifying this difference is worth noting (Winter, 2003, p. 767). Other terms that have been employed in assessment of learning discourse include “learning-oriented assessment” and “assessment that supports learning” (Gibbs & Simpson, 2004, p.2).

The practice of assessments historically, were based on psychology method particularly with a focus on cognitive measurement, thus the major concern of classical test is to recognise students who have a particular characteristic or intelligence and to know the extent of their intelligences (Biggs & Tang, 1997). The major focus to recognise a particular intelligence will determine whether some character or attribute can be identified instead of the way it was achieved (Biggs & Tang, 1997). Gone are days when assessment was done using a particular method (James, 2006). Primarily, two types of assessment have taken the lead in linking assessment and learning, namely the summative assessment and the formative assessment. In a real sense, summative and formative assessments are intertwined and there are many shades in both assessments (Benson, 2004).

‘Formative’ and summative’, from their initial use were terms used not only for the assessments functions but for the purpose the assessments stand for (Black & Wiliam, 2003). Therefore, the summative traditional assessment process might not be too supportive regarding daily learning (Black & Wiliam, 2003). However, the progress of formative assessment solely rests on the process of directed change of the techniques and teachers have to tweak their teaching method to make essential use of the changes

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(Black & William, 2003). In addition, “it is also essential to change the formative and summative work in new overall systems, so that teachers’ formative work would not be jeopardized by summative pressures, and indeed, so that summative requirements can be fully optimized by taking full advantage of improvements in teachers’ assessment work” (Black & Wiliam, 2003, p.623).

Dahal (2019), claims that the application of formative assessment can be traced historically to Scriven (1967) while the employment of the concept as a best practice is attributable to Sadler (1989). According to Sadler, formative assessment should ordinarily ensure that students understand set targets and objectives in the learning process to help them attain sufficient efficiency in decision-making as it pertains to their performance. Deeply embedded in the formative assessment theory is the need to ensure a holistic involvement of both teachers and students in ensuring that communication in the learning process is laden with feedback that would drive greater efficiency in the learning processes (Black & William, 1998). According to Yorke (2003, p.477), formative assessment must ensure that the learning process encompasses “disciplinary epistemology, theories of intellectual and moral development, students’ stages of intellectual development, and the psychology of giving and receiving feedback”. Formative assessment promotes a teacher-driven “classroom assessment”, especially in higher education (Angelo & Cross, 1993). At the core of Angelo and Cross’s proposal of some major dimensions of assessment, which include but are not limited to, are “defined teaching objectives; measurable feedback mechanisms; inclusive design of assessment tools and appraisals”.

As already described in Chapter One, the summative technique has some similarities with rote learning. Summative assessment is distinguished from the formative technique in the divergent focus on learning and not on an instant result. With the drive to achieve instant results, it is observed that assessment in primary schools in Nigeria has been “summative”, which is carried out mainly after teaching and learning have been completed (Adikwu et al., 2014). Summative assessment only makes use of tests at the end of term and hardly gives homework and projects to evaluate the students (Osadebe & Abel, 2018). Elui and Studies (2008), agreeing with this notion, thinks that summative

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assessment is largely used to assess students via end of term examinations. Summative assessment has no feedback device to give information regarding the areas that the student is weak and needs attention (Osadebe & Abel, 2018). Brian (2010) argues that the use of summative assessment has been too overriding and endorses assessment that assists students during the instruction process instead of just for grading purposes. Adikwu et al. (2014) further posit that the use of summative assessment concentrates more on evaluating the students purposely for examination. The sole aim of summative assessment is to obtain high grades, and less attention is paid to mental tasks like thinking and application (Osadebe & Abel, 2018). Alternatively, formative assessment, according to Young and Jackman (2014), is to support learning and teaching, which constitute essential factors of students' progress and help in preparing students for a future academic career with a passion for lifelong learning. Another function of formative assessment is the interaction to identify learning needs and improve teaching (Looney, 2011).

Black and Wiliam (1998) report that a core value derived from formative assessment is the efficiency of the feedback mechanism. As much as the formative assessment position is appreciated, the need to further ensure a greater understanding and deployment of the concept, according to Gibbs and Simpson (2004, p.16), must include "a student-driven response process and attitude". The implication of a student-driven response process and attitude is that student responses and willingness to improve their learning approaches and objectives must clearly be seen to improve with each assessment cycle. To cure the deficiency that might arise from poor student attitude and response to formative assessment learning objectives, the concept of "self–regulation" was suggested by Nicol & Macfarlane-Dick (2006). The concept of self-regulation is hugely dependent on students' ability to be responsible for learning outcomes and imparting of personal experiences. Other concepts of assessment as advanced by Wolf (1995) include the stretching of the assessment cycle slightly beyond the taught concepts to appreciate the ability of learners to positively engage in the process beyond classroom learning.

Notwithstanding the above positives of assessment, it is noted that when assessment is employed wholly as an alternative to the learning process, it could generate negative

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effects in the entire learning process, thereby influencing the validity and efficiency of the process (Sadler, 2007). The validity and the efficiency of the learning process are further brought to the fore when students become outcome-driven rather than knowledge-driven, which, according to Torrance (2007, p.283) is described as “achievement without understanding”. The effect of achievement without understanding therefore, is that grades become the primary objective of students, and not sufficient knowledge of the taught concepts (Tella, 2007).

The next section examines in detail the assessment of Nigerian policies on education.

2.4 Assessment in Nigeria

Assessment is not a recent development in the Nigerian educational system, as it came into existence as early as 1980 (Odo, 2014). To improve the educational standards of Nigeria, the National Policy on Education was reviewed in 2004 by the Federal Government of Nigeria (Osadebe & Abel, 2018). The essence of the NPE is that it reiterates reliance on continuous assessment. (Osadebe & Abel, 2018) as mentioned in Chapter One. “The national policy on education states that assessment and evaluation will be liberalised by basing the assessments in whole or part on continuous assessment of the progress of the individual” (Ndubueze, 2015, p.73). The reliance on continuous assessment is seen as the preferred kind of assessment that will be used in schools, as stated in the NPE.

The NPE’s goal is to make use of a continuous assessment quality assurance control instrument where the grade will form a significant score of the examination in order to attain the stipulated assessment system that is comprehensive to impact quality learning (Awofala & Babajide, 2013).“Continuous assessment was introduced following the adaptation of the 6-3-3-4 educational system with the intention to make education more reliable, valid and objective” (Osadebe & Abel, 2018, p.9). The 6-3-3-4 Nigerian system stipulates that six years are spent in primary school; three years each are spent in junior and senior secondary while four years are spent at tertiary institutions, as mentioned in. Therefore, it is imperative that the certification of basic education shall be based on continuous assessment, instead of the once-off examination known as summative

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assessment (Osokoya & Odinko, 2005). The main purpose of continuous assessment, according to NPE (2013, p.45) “shall be to measure the abilities of a student; to enhance the national competitiveness of the product of Nigeria education system; to improve the credibility of examinations conducted in Nigeria; and eliminate the untraceable problem associated with the traditional pencil paper test”.

The advent of continuous assessment in the Nigerian education system can be traced to the year 1982 and has often been regarded as “Assessment for Learning” (Awofala & Babajide, 2013). “The emphasis on continuous assessment is not limited to Nigeria alone; other African countries notably Kenya, Zambia, Ghana, and Liberia have adopted the same policy” (Faleye & Adefisoye, 2016, p.45). The main purpose of continuous assessment is to encourage students to make progress in their learning abilities and not to find out if the students have achieved the objectives of the intended outcome (Adikwu et al., 2014).

The continuous assessment system was meant to meet all aspects of students’ development, which would also involve the teacher meaningfully when assessing the students and further give them the chance to be effective and resourceful during the instruction process (Elui & Studies, 2008). In addition, students are evaluated in the affective, psychomotor and cognitive domains by using various continuous assessment tools, such as project, homework, short test, observation, questionnaire, interview, portfolios, checklists and socio-metric techniques continuously and at certain intervals (Osadebe & Abel 2018; Awofala & Babajide, 2013). Further, the grades from continuous assessment are recorded and kept for evaluation purposes.

Continuous assessment has four major components, which are: Comprehensive, systematic, cumulative and guidance oriented (Elui & Studies 2008; Oasdebe 2013b; Faleye & Adefisoye, 2016).

- Continuous assessment must be comprehensive in the sense that teachers must assess the holistically.

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- Continuous assessment must be systematic in the sense that teachers must plan their lessons before teaching and should assess students after teaching and learning has taken place.
- Continuous assessment must be cumulative in the sense that teachers must include previous data of a student in making future decision.
- Continuous assessment must be guidance-oriented teacher must use the student exam score and result to guide them.

Further, “variety of assessment techniques such as test, projects, assignments, observations, questionnaires, interviews, portfolios, checklists, among others are used to assess the students continuously" (Elui & Stusies, 2008, p.4).

Olutola, Daramola and Ogunjimi (2016) argue that continuous assessment is different from the former system of summative assessment, which is carried out after the teaching has taken place. Elui & Studies (2008) posit that continuous assessment is an assessment in a formative mode, because it involves the technique to know what students have gained during the instruction process in terms of their performance in tests and exams, abilities, character, strength and skills. The information on the students’ progress will help the teacher to know the areas that need assistance and the strategic ways to help during the teaching and learning period (Elui & Studies, 2008).

Primary education is the first phase of schooling. It occupies an imperative place in the educational system and is said to be the main success or failure of the system (Momoh & Ogonor, 2014). It is argued that the implementation of the aspiration of the education policy of Nigeria, as mentioned in Chapter One are well implemented and carried out in schools, the nation will produce employable products (students), who will be independent members of society. Also, the quality of education might improve, and the school graduates should be able to face the global world and function well in society. Akanbi and Jekanyinfa (2019) posit that the Nigerian national policy objective was a brilliant idea, but the implementation is woeful. Sani (1999) comments that the 6-3-3-4 educational policy experienced intractable problems at the implementation stage. Odia and Omofonmwan (2007) also attest that facilities needed for proper implementation were not made

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available after the commencement of the policy. In addition, the policy has not been effective in improving the education system since the implementation of the programme (Ogu, 2016). There are also several other challenges that have faced the educational policy of Nigeria.

Some of the challenges in implementing the Nigeria Educational Policy according to (Ogu 2016) are as follows:

- Lack of experience and managerial skills
- Inconsistent implementation of policies due to the politicisation of education
- Conflicts between the organisation and personalities
- Insufficient coordination and evaluation
- Lack of human and material resources
- Societal and political instability
- Ethnicity and nepotism
- Fraud and corruption
- Failure of leadership to set good standards in carrying out their duties.

2.4.1 Assessment Practice in Nigerian Primary Schools

The place of assessment practice in Nigeria primary schools. Ogunleye and Omolayo (2016) claim that proper classroom assessment implementation should produce an improved standard of education and schools, better curriculum, quality teachers, competent students, and quality assurance. The primary schools in Nigeria do not give much attention to the psychomotor and affective domains when evaluating student development; rather it focuses more on the cognitive aspect because of the quest for certificates in the Nigerian society (Idowu & Esere, 2009). Osunde (2008) claims that some primary school teachers in Nigeria do not possess requisite qualifications or do not have proper knowledge to effectively implement teacher-made tests in school-based assessments. Ogunleye and Omolayo (2016) also claim that the above statement is true and applies to some of the teachers in the secondary schools as well. The implementation

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of nine years universal basic education in 2008, according to Awofala and Babajide (2013), was intended to enhance the national framework of conducting assessments in schools by the National Council on Education (NCE) of which continuous assessment is a part (Umar, 2206).

Improvement in student appraisal in the primary and secondary levels of education was enhanced through the launching of the National Council on Education (Awofala & Babajide, 2013, p.4), which states among other things as follows:

- Students will be promoted to junior secondary school once they complete their primary six schooling.
- The examination for promotion from primary six into junior secondary school first year was eliminated.
- The Basic Education Certificate Examination (BECE) was introduced, replacing the junior secondary school certificate.
- Students who have completed basic six will gain admission into the first year of junior secondary school.

The stipulations on the innovation framework on National Continuous Assessment according to NPE (2013) are that:

i. The use of continuous assessment allows the student to be evaluated in the psychomotor, affective, and cognitive domains, and it will be carried out three times in a term.
ii. Student promotion from one class to another will require 60% in the cognitive and psychomotor domains, and 40% will be used at the end of the term.
iii. The pass marks a student is expected to score is 40% in any subject. The movement from Basic Six to junior secondary school is based on the scores from primary four to primary six. The School-Based Assessment is 40%, primary four is 10%, primary five 20%, and primary six 30%.

Nigerian teachers in the classroom are likely to advance students to the next class based on the records and testimonials given to the student by the head teachers by the end of

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the academic calendar (NPE, 2013). Students that complete the third year of junior secondary school will be given a certificate as an indication of their abilities, which is now the minimum requirement that replaces the primary school leaving certificate in the educational system of Nigeria (NPE, 2013).

A descriptive study that was carried out to investigate the competence of teachers in the evaluation of students' academics in the field proved different to what the teachers claimed they knew and what was observed (Ogunleye & Omolayo, 2016). A descriptive study was also carried out by Faleye and Adefisoye (2016) in Osun State private and public secondary schools. The research investigated the number of times teachers implement continuous assessment in the class and to find out the attitudinal behaviour of students regarding the continuous assessment practice. The findings of the study revealed that students showed positive attitudes while the teachers indicated that they fairly implement continuous assessment. "The study concluded that there was a gap between policy-dictated and actuality of practice among secondary school teachers in Osun State" (Faleye & Adefisoye, 2016, p.44).

Nbina (2011) submits that the focus of the NPE in Nigeria primary school mandates teachers to evaluate the behaviour of the students in the psychomotor, cognitive and affective domains to enable them make decisions about every student for future purposes. The information about a student's progress should be used to gauge and direct the student's placement (Osadebe, 2013a). Awofala and Babajide (2013) state that the goal of introducing continuous assessment in the primary schools is to enable teachers to evaluate students' performance comprehensively, systematically, and reliably at the national level.

A study was carried out in Imo state by Awofala and Babajide (2013) to assess the knowledge of teachers around the use of continuous assessment practice in higher education. The descriptive survey found that projects, assignments, and tests were all techniques that were used in evaluating students in continuous assessment. The teachers' attitudes and perceptions concerning the use of continuous assessment varied

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depending on the ability of the teachers, alongside the school's collaboration and support from the students (Awofala & Babajide, 2013). The accomplishment and quality of continuous assessment depend a great deal on the co-operation of the students, the teachers ability hinged on the support system available. (Awofala & Babajide, 2013).

A survey of 3,325 basic education teachers from six geopolitical zones of Nigeria regarding challenges of continuous assessment implementation was carried out by Obioma (2010). The study discovered that the basic education teachers have little knowledge regarding the use of continuous assessment practice and also do not apply it correctly (Obioma, 2010).The NPE gives a transparent guideline regarding continuous assessment, although it varies and is different from state to state, as stated in the continuous assessment handbook (NPE, 2013).

In Science, Technology and Mathematics (STM), Nneji, Fatade and Awofala (2012) investigated 305 teachers' attitude concerning the practice of assessment. They found that teachers displayed positive attitudes in the use of assessment practice. According to Nneji et al., (2012) and Awofala and Babajide (2013), teachers' attitude towards assessment is sometimes influenced by gender and teaching experience.

To effectively carry out the role of assessing students, assessment of one kind or the other is essential. Consequently, an assessment must be a process to identify attitudes, and development of the students by the teachers (Kane & Bejar, 2014). Afemikhe (2007) further states that most tertiary institutions have also made continuous assessment practice implementation a compulsory component of course assessment in Nigeria. Meanwhile, no matter a child's behaviour or character, even though the child lacks the basic skills, the child will still get a certificate at the end of the schooling session (Salau, 2016). Consequently, the child's affective and psychomotor abilities, and interests, have no role to play in obtaining a certificate at the end term (Salau, 2016). Also, the assessment in primary schools does not provide feedback for teachers and students on learning problems, because it is given at the end of the academic session (Elui & Studies, 2008). Assessment, according to Kane and Bejar (2014), should be a process where the

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teacher considers the whole of the student's appraisal when evaluating the instruction process. Evaluation during the instruction process should cut across all areas of learning: the affective, cognitive, and psychomotor domains (Kane & Bejar, 2014; Oguneye, 2002).

Osadebe and Abel (2018) posit that assessment is a valid, reliable, and comprehensive technique to evaluate the progress of students. Assessment aids the analysis and influences decision-making of students. In addition, assessment is a cumulative and direction-based cycle that should influence positive learning (FMEST, 1999; Osadebe, 2015). The cycle of assessment encompasses "cognitive, affective and psychomotor domains of behaviour" on a continuous basis as well as the usage of data (Osadebe, 2013b).

The need to ensure the continuous nature of assessment and the content that guides it is one that is properly embedded in the NPE, requiring the appraisal of learners throughout the learning cycle (NPE, 2013). Most importantly, there is a need to ensure that a comprehensive assessment approach is undertaken for effective outcomes. A comprehensive assessment approach as employed here includes ensuring the presence of the various levels of cognitive classification of educational objectives as developed by Bloom et al., 1971 as cited in (Osadebe, 2013b). "The cognitive domain deals with a student's intellectual ability, that is how the student thinks and reasons. The instrument used in measuring students' cognitive behaviour includes achievement tests, aptitude tests and intelligence tests" (Osadebe, 2014a, p.9).

Another core aspect is that of the affective domain, as conceptualised by Krathwohl (1964) and Osadebe (2013b, p.15), which includes "receiving, responding, valuing, organization and characterization by a value or value complex". The representation of the affective domain shows students' disposition and demeanour towards and during the instruction period, which is often measured through observation. The student's psychomotor domain must be measured within the frameworks of perception, response, and adaptation (Gronlund, 1985; Osadebe, 2014a). The psychomotor assessment comprises students' effective use of the body towards appreciation of learning outcomes

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and is seen in sports, writing and involvement in other physical activities (Kpolovie, 2002). Consequently, for an assessment to be efficient and effective, it must embrace the "cognitive, affective and psychomotor" components (Osadebe, 2013b, p.16).

Adikwu et al. (2014) attest that exams carried out in schools are supposed to be diagnostic. However, the efficiency of the method of assessment is not what society at large expects. The major problems leading to the inefficiency of continuous assessment in the educational system are lack of knowledge, large class sizes, excess workload, shortage of facilities, insufficient time, and poor salaries (Adikwu et al., 2014). Continuous evaluation is meant to overcome difficulties in learning abilities, motivate students, allows knowledge retention and learning sharing, and therefore it is called formative evaluation (Adikwu et al., 2014). It can also deliberately discover which students have learning difficulties and provide strategies to improve the development of the students (Adikwu et al., 2014). Consequently, it is expected of the teachers to validate their test items and use the items' analyses to construct good test items (Ajogbeje, 2013). Meanwhile, primary school teachers mostly depend on the test items that they get from publishers, textbooks, and past questions from examinations (Ajogbeje, 2013). The test administered to the student will not be reliable if the test constructions and validation are not properly carried out, which would make the result invalid and useless (Ajogbeje, 2013). Ordinarily, teachers are supposed to use the test result information to give feedback and corrective measures to the students during evaluation (Boston, 2002). The above calls for a paradigm shift in the assessment practices in primary schools in Nigeria to have assessment procedures that would highlight learning challenges of students and offer feedback and remediation for the students. These identified lapses in assessment methods in primary schools make room for feedback, that is formative assessment test items, with correction measures that are far more efficient than summative tests and continuous assessment (Adikwu et al., 2014). Formative assessment practice should be encouraged and should be used every day by teachers, students, and peers during the instruction process. Various forms of assessment and purposes will be discussed in the next sections.

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2.5 Types of Assessment

The types of assessment used to evaluate students' progress are formative assessment, summative assessment, pre-assessment, and diagnostic assessment (Olutola, Daramola & Ogunjimi, 2016). Pre-assessment is defined as the assessment of student learning before learning (Gareis & Grant, 2015). Pre-assessment helps teachers determine whether the student has any knowledge of the task before learning.

Assessment that is diagnostic is used by the teacher to help students that struggle with a certain aspect of performance in a classroom task (Bennett & Gitomer, 2009). Diagnostic assessment is also used to find out what a student does not know about a topic (Olutola, Daramola & Ogunjimi, 2016). Diagnostic assessment is applied to assist a student who is at risk of failing. It is also used to strategise ways to get rid of performance inadequacies (Bennett & Gitomer, 2009).

Summative assessment is used in taking high-stake decisions on the performance of students but cannot be used for taking decisions on daily or weekly basis by students and teachers during the instruction process (Stiggins, 2002). Summative assessment can neither diagnose students' needs during learning nor provide parents with information on how to support their children (Stiggins, 2002).

Formative assessment occurs at all the stages of the instruction process (Warwick et al., 2014). In the same view, Gareis and Grant (2015) describe formative assessment as the assessment of student learning incorporated into the act of teaching. Earl (2006) further claims that formative assessment gives feedback straight away to the teachers and students; it emphasises weaknesses and strengths; and guides on the next step of action to take. Dixson and Worrell (2016) believe that feedback also encourages all students to take ownership for their learning for better performance and improvement in academics. The feedback about the learning progress of students is obtained using some assessment techniques like "multiple-choice exercises, short answer tests, open-ended tests, extended response tests, individual interviews, performance events, performance tasks, in which a student has extended time, projects, portfolios, observation and anecdotal

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records" (Brink, 2011,p. 32). Formative assessment is arguably more helpful to students than other kinds of assessment by providing continuous feedback when the lesson is taking place (Naghdipour, 2017).

In view of the above discourse, it is ordinarily expected that students should be able to deduce ideas, know their style of learning, include patterns and draw a conclusion regarding their strengths and abilities with the feedback they get (Scherman, Van Staden, Howie & Venter, 2005). Some teachers are used to summative testing or evaluation, as it provides an easy option according to experiences from the field. According to Kanjee (2000), the role and purpose of, and differences between summative and formative assessment, continuous to attract academic attention. Some identifiable differences between summative and formative assessment testing include:

- Formative testing refers to structured testing during learning with potentials to improve learning (Marsh, 2007). The purpose of formative testing is generally to help in the development, while summative testing refers to structured testing provided after a course (Osadebe & Abel, 2018). Summative testing is used to measure the effective nature of every learning activity (Garrison & Ehringhause 2007).

- Formative testing is given on the conclusion at every unit. The result of formative testing is used primarily to reinforce the learning of students who have mastered the material and to diagnose the learning errors of those who have failed to achieve mastery (Looney 2011). Formative tests are typically not used for assigning course grades, whereas summative testing results are used primarily for assigning course grades. Summative tests are typically carried out after the course to find out how well the students are performing in all areas of the objectives covered by the various units of instruction (Gronlund, 1985).

- Formative testing is given periodically during instruction to keep an eye on students' learning development in order to give on-going feedback to students and teachers (Van der Nest, Long & Engelbrecht, 2018). Formative testing strengthens

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learning and discloses learning weakness in need of correction, while summative testing outcomes can be used for gauging the efficiency of the teaching. The administration of summative testing is not periodic but terminal (Gronlund, 1985).

- Formative testing is basically concerned with helping the developer of programmes to use empirical research methodology for improvement of the programmes (Bennet & Gitomer, 2009). Summative testing, on the other hand, is concerned with evaluating at the end of programmes (Bennet & Gitomer, 2009).

- Formative testing is designed primarily for those who are working on the development of the programme (Bennet & Gitomer, 2009). Formative assessment monitors students' learning through classroom tests or assessment techniques, for example, continuous assessment. Summative testing can measure students' learning through standardised examinations (Looney 2011).

- Formative assessment is purposely constructed to guide the student on what the student needs and to find solutions to make the appropriate decisions on how the student can improve (Kuze & Shumba, 2011). Summative assessment is conducted at the end of the instruction period to convey the progress of the student (Earl, 2006).

- Summative assessment is the summing up of students' performance, while formative assessment deals with gathered information to adjust learning (Looney, 2011).

The assessment system is organised for proper implementation and to show proof of students' on-going progress (Kanjee & Sayed, 2013). Notably, "while the different purposes between formative and summative assessment may not be completely incompatible, there are tensions between the two practices because they serve different purposes" Black and Wiliam (2007, pg.8). The authors further argue that:

> "Where the formative purpose is paramount, the requirement is for evidence that provides a dependable guide to instructional action such that

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> the inferences are very much in the 'here and now' domain. On the other hand, where the summative purpose is paramount, the requirement is for evidence that supports inferences about what the student has been, is, or might be able to do".

Meanwhile, the connections or the different purposes between formative and summative assessment might successfully improve learning (Dixson & Worrell, 2016). The implementations of summative and formative assessments are both essential aspects of gathering information (Garrison & Ehringhaus, 2007).Bennet and Gitomer (2009) reported an evaluation model developed in response to the inadequacies of system assessment programmes that are referred to as the 'Cognitively Based Assessment *of*, *for* and *as* Learning (CBAL) model' (Bennet & Gitomer, 2009). The CBAL was designed purposely to "document learning gain by the student(of learning); help identify how to plan instruction (for learning) and is considered by students and teachers to be a worthwhile educational experience in itself " (Sabatini, Bennett & Deane, 2011,p.3).

According to Sabatini, Bennett, and Deane, (2011) the CABL model offers an overview of three components of assessment which are:

- The summative type assessment (monitoring).
- The classroom-based assessment (formative); and
- The professional development (assessment as learning)".

The vision of the groundwork regarding these components of assessment is that all the three types of assessment should blend with cognitive models that are recognised to support the instruction process (Van der Nest et al., 2018). The professional development components that blend with assessment as learning are needed to assist teachers with deeper insight into the knowledge domain through engagement with the activity sets (Van der Nest et al., 2018). The professional development component is also required to support teachers' classroom practice of formative assessment, which is conceptualised as assessment for learning (Bennett & Gitomer, 2010).

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Further, the CBAL mechanism on formative assessment is made up of three mechanically associated actions namely to make inferences concerning student progress; to make adjustments with the inferences; and to use students' adjustment for correction (Sabatini, Bennett & Deane, 2011). The CBAL cognitive competency model also consists of two action mechanisms and the activities teacher use during the instruction process (Sabatini et al., 2011). Cognitive competency helps in the habit of mind, strategies, and processes as well as in identifying instructional principles for assessment design use and specification of knowledge. Also, the cognitive competency model serves as a universal theoretical underpinning for both formative and summative assessment. The focus of assessment has recently moved from the traditional way of assessing students towards a broader way known as "assessment for learning" or "formative assessment" (Olutola, Daramola & Ogunjimi, 2016). Overtime, individual teachers have made use of the formative assessment method in their instruction process (Olutola et al., 2016). The next section will discuss the concept of formative assessment.

2.6 Concept of Formative Assessment

The concept of formative assessment has been discussed by various scholars. Globally, teachers are becoming more aware of assessment practice in the classroom. Assessment is a tool used daily as a powerful lever for raising students' achievement (Earl, 2006). Gareis and Grant (2015) state that assessment is integral to teaching; whether formal or informal and serves as a means by which teachers know what students are learning. Assessment for learning can be formative when it is used during the learning and teaching period (Black & Wiliam, 1998). In addition, assessment for learning is used to foster student teaching (Benson, 2004). The concept of formative assessment came into the educational system in the 1970s (Yorke, 2003). The concept of formative assessment according to Antoniou and James (2014) is the reflection of students' learning during teaching to improve learning based on the information gathered. Formative assessment is characterised by different forms of assessing styles and strategies; being focus-oriented and personalised (Liqui, 2011). For Bell and Cowie (2011) student achievement and progress are motivated with the implementation of

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formative assessment. Formative assessment offers paramount promises hoping for a better outcome on performance.

The main goal and aim of formative assessment are to promote the development of students during the instruction period with different evaluation means and the active participation of the students as well (Perera-Diltz & Moe, 2014).In addition, formative assessment is also used as a different assessment practice for the development of the instruction process. Liqui (2011) claims that if formative assessment implementation is practised in the appropriate ways, it will make students improve in their style and method of learning, and their self-confidence can be enhanced, which will encourage autonomy and independent learning. Perera-Diltz and Moe (2014) attest that formative assessments have many sides, which comprise of self-assessment, peer-peer assessment, co-assessment, and feedback from the teacher. Looney (2011) states that students need to be involved in self-assessment exercise because it increases their motivation to learn. Liqui (2011) further posits that if formative assessment is used constantly, correctly, and appropriately with anticipation, student performance and development will be improved.

Formative assessment practice in the classroom has been in the increase in recent years, but it has stayed resolute in practice (Leung &Wong, 2008). Wylie and Lyon (2015) opined that formative assessment is a method that is applied while the lesson is going on to correct the instruction process for the student and teachers to make adjustments for improvement. Formative assessment is the extent to which the information gathered on the evaluation of the student and the teaching are used to enhance the learning and teaching process as well as improve the student development progress (Popham, 2008). Formative assessment is a continuous process designed purposely for the progression of teachers and student user-based information to correct the teaching and learning (Popham, 2008). Earl (2006) states that assessment used in a formative way is a continuous process that is integrated into learning activities that take place every day in the interaction of the teacher and student.

According to Awofala and Babajide (2013), formative assessment depends on all decision made by the teachers in the classroom to improve students' achievement during the

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learning and teaching period, in other words, identifying and responding to the students' learning needs. It also prepares students for a better future by acquiring sound knowledge and high-profile skills. Formative assessment has many characteristics and techniques (Antoniou &James, 2014).

According to Marsh (2007, pg. 4.), some of the formative assessment techniques include:

- Peer-peer assessment.
- Redrafting of work.
- Developing communication skills.
- Problems solving skills, and
- Feedback comment rather than grades.

The formative techniques help students to interact with one another during the teaching and learning process (Torrance 2007; OECD, 2005). The assessment activities rooted in the instruction period to give feedback to students and teachers, and to subsequently plan what to do next is regarded as formative assessment (Black, Harrison, Lee, Marshall &William, 2003). Formative assessment is that assessment that is purposely and intentionally carried out to give feedback regarding the student's performance in order to advance and speed up learning (Sadler, 1989). Formative assessment is also defined by Earl (2013) as a continuous method to obtain information regarding the progress of the student's attainment and to improve on their learning. Formative assessment also occurs when student improvement is used to promote the instruction process (Shepard, 2008).

Formative assessment can also be defined as the assessment activities that take place during the learning and teaching process to improve on the instructional period (Shepard, 2008). Similarly, formative assessment fosters student abilities through the feedback information gathered and advances the learning and teaching process (Nicol & Macfarlane-Dick, 2005). Formative assessment entails things teachers do to help learning take place, like quizzes, performance tasks, assignments, informal checks, and dialogue (Benson, 2004). Formative assessment is a well-thought-out testing method that is continuous with the intention to improve the instruction process through the feedback information (Wiliam, 2009).

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The feedback assists teachers in determining how efficient their mode of instruction is; appraising students' understanding and performance; and in determining the areas of strength and weakness of their students. Owolabi (2000) also suggests that the corrective feedback system makes formative evaluation useful for pursuing the aims of mastery learning. Boston (2002) further argues that the feedback will help the teachers to recognise the areas where the students need remediation, in other words, re-teaching and re-testing. Awofala and Babajide (2013) argue that formative assessment is not purely for testing; rather it is a procedure that is used to collect information regarding student improvement to adjust learning.

Formative assessment engenders mastering learning with the intention to make sure students demonstrate the learning objective outcomes before they proceed to the next class (Bloom et al., 1971). The mastering learning concept gave birth to modular instruction, which is a self-directed packet or modules of instruction (Bloom et al., 1971). The practice of scaffold learning in recent times is said to be like the use of mastering learning in theory, but in real practice, students work mostly on their own with less attention or co-operation from the teacher (Allal & Lopez, 2005). The student cannot proceed to another class if the expected objective outcomes are not met (Allal & Lopez, 2005). This failure to reach expected objectives could however be resolved by engaging the students in groups as informed by the corrections required of them (Black & Wiliam, 2011).

According to Wiliam (2014), it is imperative to put Terry Crooks' study of formative assessment practices into efficient use, as it has the potential to enhance student motivation. Sadler (1989) attests that the aim of formative assessment is generally effective once students can keep an eye on the quality of their work with detailed provisions that are integrated with the instruction process. Formative assessment "appears to be one of the most potent forces influencing education; accordingly, it deserves very careful planning and a considerable investment of time from teachers" (Crooks, 2001, p.13).

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Paul Black and Dylan Wiliam (2015) carried out over 250 surveys on formative assessment practice. Wiliam (2014) further stated that the findings that were published in *Inside the Black Box* made a persuasive argument regarding the practice of formative assessment implementation.

2.6.1 Purpose of Formative Assessment

Formative assessment serves different purposes. One of the purposes is to find out what teachers are doing. Others include what the teachers' views, beliefs and values are of formative assessment practice (Heritage, 2010). Formative assessment also serves as immediate feedback given to both students and teachers, which emphasises strengths, identifies challenges, and points to next steps of action (Black & Wiliam, 2009). Formative assessment further applies in all the stages of the instruction process. If formative assessment is important in the education processes, then it helps the teachers to make effective lesson plans to meet their goals of aiding their students. Formative assessment encourages all students to take responsibility and participate in the learning process for better performance and improvement in academics (Olutola et al., 2016). The feedback channels enables the teachers to determine the students' level of progression and adjust their teaching method to keep them on track (Earl, 2006).

Formative assessment has several forms of information sources, such as observation by the teacher, students' work in progress, interaction among peers, portfolios, and student involvement (Wiliam, 2011). Formative assessment does not ascribe scores or grades; rather formative assessment is used for record keeping, descriptive and anecdotal purposes (Olutola et al., 2016). Formative assessment is fundamentally concerned with change. Formative assessment in the classroom is intended to be a vehicle of change that helps to identify the differences between the students' present level of performance and the targeted outcome (Fulcher, 2014).

Formative assessment is to help meet the needs of students and to motivate for students' involvement during the learning process (Stiggins, Arter, Chappuis & Chappius 2004; Stanković, Milovanović & Radović; 2017). Formative assessment implementation assists

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the teachers to find out what the students have mastered, fairly mastered and know and have not mastered so that they can use different methods to advance learning for better understanding and performance (Stiggins et al., 2004). According to Grausz and Soman (2016), formative assessment information is used purposely to track the extent of students' comprehension and the areas students will need help. The information obtained helps teachers to adjust their lesson period so that students' individual learning needs can be met (Gareis & Grant, 2015). The information obtained also makes the students recognise their abilities, styles, and progress and provides the feedback techniques that will be used by the students and teachers for corrective measures (Grausz & Soman, 2016). Common examples of formative assessment are writing projects, writing assignments, tests, and quizzes (Olutola et al., 2016). It is imperative to take cognisance that formative assessments can be done in different ways, including " through quizzes, work samples, daily work, exit slips, and journals or in an informal manner such as whiteboard demonstrations, thumbs up or thumbs down, directed questions, and discussion reflections". (Wanger, 2015, para. 3.) In the classroom, "formative assessment is done formally through assignments, tests, quizzes, performances, projects, and surveys; or informally through questioning and dialogue, observing, and note-taking". (Modu Edu, n.a, p.5)

The principles of formative assessment as reported by Stiggins et al., (2004) are as follows:

- Formative assessment helps to recognise the influence of assessment.
- provides feedback to students.
- motivates students to be actively involved during the instruction process.
- helps to adjust the instruction process; and
- Formative assessment encourages autonomous learning.

It is argued that if these five principles were followed by Nigerian teachers, the rate of students' failure in both the internal and external examinations could be reduced. The formative assessment job is to give feedback to both teachers and students concerning the students' progress in grasping the learning objectives and goals (Looney, 2011). The

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responses from students ought to be valued, revised, applied, and practised by teachers to help build up teaching strategies (Stiggins et al., 2004).

Nicol (2009) advanced key essentials of positive feedback mechanism:

- The principles of feedback give explanation of good appraisal concerning student to the teacher.
- Feedback develops and facilitates self-assessment, autonomous learning, and self-directed learning.
- Feedback helps to provide information regarding student learning and progress
- Feedback also helps motivate interaction between students and their peers in learning.
- Feedback motivates and encourages peer dialogue with teacher regarding the instruction.
- Feedback encourages constructive motivation.
- The teacher's teaching skills are enhanced during the learning process through feedback.

These feedback principles would improve students' performance if practised effectively in Nigerian primary schools. This assumption is advanced because adequate feedback and remediation are the backbones of formative assessment. Black and Wiliam (2010) reported that studies on assessment techniques help increase teaching and learning processes and methods.

Formative assessment serves the following purposes:

- Formative assessment improves quality learning when the student receives quality feedback (Heritage, 2010).
- Formative assessment increases learning gains in students with disabilities and low-achieving students (Boston, 2002).
- Formative assessment helps in using the information the teacher obtains on the area's students are having difficulties to adjust the instruction process by teaching all over again (Boston, 2002).

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- Formative assessment helps the student to build confidence in themselves by tracking their progress to attain the desired standard (Stiggins & DuFour, 2009).
- Formative assessment enhances the interaction between student and teacher leading to more cooperation among them towards working on the areas needing improvement (Stiggins & DuFour, 2009).
- Formative assessment also serves the purpose of improving student performance and not just to allocate grades (Dixson & Worrell, 2016).
- Formative assessment also makes students to be actively involved during the teaching and learning process (Marsh, 2006).
- Formative assessment also helps students to be better focused in their learning (Marsh, 2006).

Given these many positive attributes of formative assessment it is argued that if Nigerian primary schools could put formative assessment into practice, it would enhance quality of education and student learning as well as enhance teaching in the country. Moreover, teachers can know the strength and ability of the students if they can adhere to the principles and ideals of formative assessment.

2.6.2 Teachers' Value and Practice of Formative Assessment

The quality of teaching is not just based on the method and style of teaching but on the ability of the student to progress towards attaining the intended learning objectives (Gareis & Grant, 2015). As mentioned in Chapter One, values and practice are interrelated, as what the teacher values is what the teacher will practice. Omeje and Eyo (2008) posit that value is a truth-seeking perception; it varies in character. Different schools of thoughts hold opposing views on issues like the classification, forms, subjectivity, objectivity, and definition of value (Harland & Pickering, 2011. Value is generally recognised as an important feature in people's relationships (Omeje & Eyo, 2008). Value is believed to influence people's lifestyle and tastes, which might lead to an insufficient perception of the impression of value, simply because the idea is more dominant and wider in meaning (Carr, 2011).

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In examining the concept of values, it is imperative to highlight that it is a nuanced concept that has no specific definition, as it varies from scholar to scholar. However, an area that seems common is that value concepts are individually and behaviourally motivated by social forces (Kuçuradi, 2010; Kuşdil & Kağıtçıbaşı, 2000; Ülken, 2001). Consequently, value plays a major role in formal and informal education activities in schools, homes, and religious organisations. These social forces therefore inculcate various value systems in individuals, and influence on a great extent their means of judgement and decision-making (Özgüven, 1994). "Value as a high or beneficial quality which an entity is believed to have socially, morally or aesthetically is a basic criterion that determine the individual's attitudes and behaviours" (Celikkaya, & Filoglu, 2014, p. 1553). The impact of values therefore on a student's response to assessment is brought to the fore by taking into cognisance that individual's response, specifically to processes regardless of religion, culture and nationality (Tonga,2016), environment (Kağıtçıbaşı, 2010). And such responses could be reinforced by either negative or positive value dispositions. In view of these, this research postulates that a good assessment technique would aid the formation of values in both students and teachers. Black and Wiliam's (1999) "inside the black box" survey regarding teachers' implementation of formative assessment dealt with the promotion of the teaching and learning process but neglected the matter of quality. A good formative assessment technique would ultimately impact more positively on societal development and coherence.

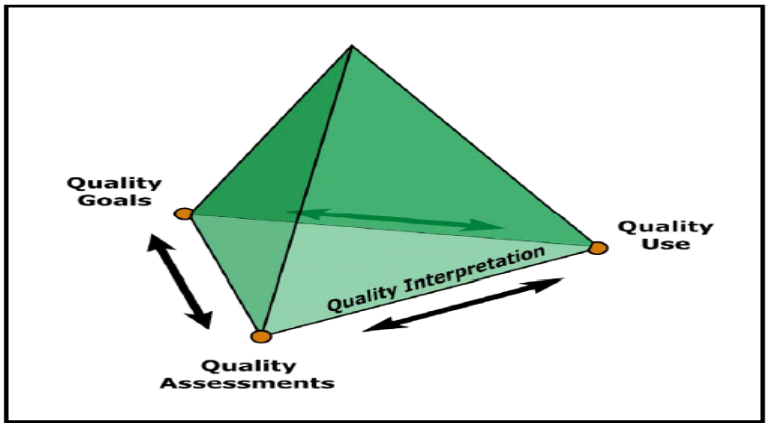

Figure 1:Quality Classroom Assessment Framework

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Source: Herman, Osmundson, Ayala, Schneider and Timms (2006)

Figure 1 presents the quality classroom model as a dominance of the learning goals in assessment practice with connection to an efficient learning and teaching process (Herman et al., 2006). The quality classroom assessment framework research sees quality assessment practice as incorporated systems that give the necessary information in order for the progress of the student to meet the intended learning goals and outcomes during the instruction period (Herman et al., 2006). The model considers validity and the connection regarding assessment goals and curriculum in as much as great importance is placed on the quality of formative assessment practice, which is illustrated in Figure 1 (Herman et al., 2006). Consequently, various degrees of importance are attached to the dimensions to guarantee validity (Herman et al., 2006). “The quality of formative assessment rests, in part, on the strategies teachers use to elicit evidence of students’ learning related to goals, with the appropriate level of details to shape subsequent instruction” (Looney, 2011, p.10). If the assessment practice lacks the valid quality that is needed for the implementation of the outcome on the information, the feedback will not be authentic, which will result in false inference, rendering the purpose invalid (Herman et al., 2006).

This study thus investigates differences between what teachers reportedly value and practice with the eventual aim of how the implementation of formative assessment practice in the classroom in Nigeria can enhance the teaching and learning process to generate quality learning. Warwick et al (2014) assert that formative assessment practice must be sound, the information must be based on a good quality technique and such techniques include group discussion and questions (Warwick et al., 2014). Student learning process serves as a major focus, which is an imperative feature; some of the literature that dealt with teachers’ formative assessment practices mentions some of the components (Herman et al., 2006)

According to Herman et al. (2006), the “highly regarded *Knowing What Students Know” (KWSK)* study, initiated investigation into measurement, cognition and psychometrics to put together a persuasive opinion regarding formative assessment’s place in the teaching

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and learning process. In addition, the KWSK also emphasised the necessity to implement learning-based assessment as well as the imperative of teacher-made assessment, which puts together available information in relation to cognition and learning with evaluation improvement and competence theory (Herman et al., 2006). Further, the scholars that participated in the KWSK study came up with ideas to design a model but the input did not explain how the assessment can be applied by the teachers to enhance the instruction process to foster learning (Herman et al., 2006).

As noted earlier, this research focuses on examining teacher differences in value and the practice of formative assessment. The next section discusses the formative assessment practice and its benefits.

2.6.3 Formative Assessment Implementation Benefits

The benefit of implementing formative assessment. Marsh (2007, p.1) states that “formative assessment involves providing "useful" feedback on tests and homework. Formative assessment is not based on grade, it encourages learning gain instead of focusing on passing exams or getting the right answers (Marsh, 2007). Hodgson and Pang (2012) claim that the greatest impact of formative assessment is in its ability to allow students to form a more detailed opinion of their capabilities, which can then be utilised to inform their further study and remedies (where necessary) (Adikwu et al., 2014). Capability, according to the Merriam-Webster Dictionary, means the quality or state of being capable. According to Clark, Biggeri, and Frediani, (2019), capability helps to shape a student’s choice, abilities, opportunities, value, and the freedom to pursue such values, choices, abilities and opportunities, including participation in the process.

For example, a student can know his or her reading skills, strength, and capability when he or she is engaged in classroom tasks. Brian (2010) claims that the frequent use of formative assessment leads to many benefits other than the learning obtained. Frequent feedback also benefits the student by keeping track of the areas of weakness and strength and improving on them (Brian, 2010). The use of formative assessment tools frequently helps the teacher to improve the students’ capability (Odland & Mittenberg, 2011; OECD, 2008). Consequently, the government is “motivated by quantitative and qualitative

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evidence that teaching, which incorporates formative assessment has helped to raise levels of students' achievement and has better-enabled teachers to meet the needs of increasingly diverse student populations, helping to close gaps in quality of student learning outcomes" (OECD, 2008, p.1).

When teachers allow classroom interaction, peer and self-assessment techniques, classroom discussion, and give assignments to improve current learning abilities (Black & Wiliam, 2003), the feedback given to the students during the instruction process helps to improve learning and performance. The feedback can also encourage the student to put more effort into challenging tasks (Spiller, 2009). In addition, feedback facilitates teacher and peer discussion, self-development reflection and closing of any difference between present learning and desired performance. Improvement in students' learning is confirmed when the feedback they get concerning a task and the way to approach it more effectively, especially regarding the intended learning outcome is achieved (Nicol & Macfarlane-Dick, 2006). Furthermore, Jones (2005) also notes that the use of formative assessment increases autonomous learning, empowers the students, improves corrective remedial measures and creates awareness about the assessment criteria. Benson (2004) also agrees that the application of formative assessment creates a strong relationship, connection and bond between the student and teacher.

Formative assessment, offers several distinct benefits, according to Chappuis & Stiggins (2002) which include:

- It provides feedback, which helps teachers to quickly know what to do next.
- The feedback helps to adjust the learning and teaching process.
- The students who are assessed benefit from the feedback information they get.
- The information about students' progress enables the teachers engage efficient means of assisting student learning experience

Formative testing aims at mastery learning, which is a highly successful strategy of imparting knowledge (Bloom et al., 1971). Mastery learning involves feedback coupled

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with corrective instructions and remediation. Owolabi (2000) confirms that remediation through the corrective feedback system creates an extra workload for the teachers, because they have to get used to the remediation style and prepare to educate the students to make the latter achieve the intended learning objectives. Bloom et al., (1971) attest to the stance that the corrective measures include repeating the instructions so that the student can master the content taught.

Some key factors of formative assessment that boost the learning and teaching process according to (Black & Wiliam 1998: as cited in Marsh, 2007) are as follows:

- Students get useful feedback with the aid of formative assessment.
- Students self- esteem is enhanced and motivated.
- Students can assess their own work and peer-assessment is motivated.
- Teaching method is adjusted to meet students learning needs.

These factors, if well put in place, can help increase the progress and performance of students, and teachers. In addition, Grausz and Soman (2016) adduced three goals of formative assessment practice, which are:

I. With formative assessment practice in place, the areas where students are struggling and doing well can be tracked. Formative assessment also provides feedback information that addresses the targeted areas for the teachers to improve on their teaching methodology. The students also know in which areas they are strong or weak (Grausz & Soman, 2016).
II. Teachers develop training innovations and techniques that positively respond to the needs of the students when they are well equipped and have the proper training. The formative assessment innovation helps to improve their teaching method (Grausz & Soman, 2016).
III. Teachers' regular use of different methods in the instruction process also boosts the confidence of students, which also leads to active interactive sessions that encourage students' involvement (Grausz & Soman, 2016).

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Furthermore, Boston (2002) confirms that formative assessment helps to guide the teacher to make use of the information to adjust their teaching in the instructional period to meet the students' needs individually. The feedback information helps teachers to improve teaching style for better output (Boston, 2002).

Dixson and Worrell (2016) support the theory that formative assessment practice can also help to monitor the growth of individual students and provide learning experience through frequent feedbacks. The feedback provides sufficient learning experiences. Teachers can use different formative assessment tools and recourses to personalise learning gain (Dixson & Worrell, 2016).

According to Hattie and Timperley (2007), formative assessment also causes the student to improve and retain newly acquired knowledge. When students receive frequent feedback that are geared towards their learning need, they imbibe greater rates of retention that make learning a more meaningful and long-term goal.

Looney (2011) advocates that feedback helps to descriptively identify gaps in understanding and inform the student specifically on how to improve on their learning instead of just focusing on the areas in which they are not doing well. According to Owolabi (2000), the student's progress is constantly monitored to attain the intended learning goals in order for both the teacher and student to have a clear understanding before the student completes the course.

For Stiggins and DuFour (2009), another benefit is that practising formative assessment increases rigour, and it helps the teachers to use the information gathered to know the student's need. As soon as teachers know the need of students, they make sure the learning environment challenges the student to progress and develop (Stiggins & DuFour, 2009).

According to Boston (2002), the academics of the student are also improved with regular feedback, which is the primary function of formative assessment. Formative assessment

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practice helps the students improve. Feedback also helps the student to be involved deeply in meta-cognitive techniques like self-monitoring, personal goal planning and autonomous learning. Stiggins and DuFour (2009) claim that formative assessment practice also increases student involvement and motivates them to learn. Once students know what they are expected to do, it motivates them to connect the learning objectives to real world problems, especially when they have an aim. Marsh (2007) also confirms that with formative assessment practice, the students get clear learning and understanding, and they stay focused regarding the learning objectives. Teachers are aware of individual students' needs. Heritage (2010) posits that formative assessment practice encourages self-regulation in students. The use of formative assessment makes students take responsibility for their own learning and build on opportunities to be autonomous thinkers. Marsh (2007, p.1) also "noted that students with learning disabilities who are taught to use self-monitoring strategies also show performance gains". Adikwu et al. (2014) further states that the information teachers gather using formative assessment practice helps them to make future decisions on the students' placement.

Marsh (2007) further posits that it is evident that formative assessment is not used in the classroom frequently irrespective of the numerous benefits it possesses. Often referred to as "a poverty of practice" the state of formative assessment is perceived as weak (Marsh, 2007, p.2). The next section highlights some challenges in the implementation of formative assessment practice.

2.6.4 Formative Assessment Practice Challenges

While formative assessments are desirable and appealing, it has been shown that teachers do not find the practice easy during the instruction process (Antoniou& James, 2014; Earl, 2013; Brian, 2010). Brian (2010) opines that a lot of research studies have revealed important learning gains from proper implementation of formative assessments following teaching practice and students' learning. Yet, there are still many challenges facing proper use of the tool or concept in everyday classroom settings.

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Obvious is the challenge that formative assessment practice increases the workload for both the teacher and student because it involves keeping extensive records of students' progress and to monitoring students' performance all through the instruction period over the academic year (Awofala & Babajide, 2013). Most of the teachers are familiar with the use of a summative assessment practice, which takes place once in a term. Teachers therefore find it very challenging to successfully implement formative assessment effectively and efficiently (Black & Wiliam, 1998). Many teachers would prefer not to grade, by which the act of teaching would have been pleasant (Benson, 2004).

Some of the barriers to formative assessment practice, according to Salau (2016), are:

- Lack of commitment from the staff to implement formative assessment practice.
- Some teachers do not have sound knowledge on use of formative assessment practice.
- The approach to formative assessment practice by teachers is just on the surface and reduces its essence.
- Autonomous learning is not promoted, and teacher control is subsequently reduced.

For any institution to be successful in achieving its goals and objectives, the teaching and learning process depends on the teacher's performance and the act of teaching to a large extent (Salau, 2016). For that reason, insufficient dedication, and devotion on the part of the teachers could be an obstruction to the proper application of a formative assessment practice (Salau, 2016). Teachers also need to acquire a sound knowledge and understanding regarding the practice of formative assessment for them to be able to apply it properly during the instruction process (Sardareh & Saad 2012; Black & Wiliam 2003). Once teachers have mastery of the formative assessment practice, they should be able to strategize on different methods to support students and help to bridge the gaps that exist between the expected outcome and present performance (Salau, 2016).

Another issue inhibiting the application of formative assessment is class size (Adikwu et al., 2014). In Nigerian schools today, enrolment is on the increase without a

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corresponding increase inhuman resources and improved facility for learning. The increase on enrolment makes it complicated to carry out a frequent evaluation of students by the teachers and give feedback to the students for improvement (Adikwu et al., 2014).

Marsh (2007) submits that cultural scenery is possibly another challenge because many education institutions sing the praises of students who perform well academically based on high pass rates in summative examinations, regardless of their moral or ethical behaviour. Further, the society often sings the praises of students who achieve a "product" or "level", yet give little recognition to students that do well in "perseverance", "critical thinking", "problem-based learning", and "self -learning"(Marsh, 2007, pg. 3). Meanwhile, the latter group of learners possess the imperative qualities that underpin the enacting of formative assessment practice (Marsh, 2007). Some of the teachers lack the necessary skills in proper implementation of the formative assessment practice (Odo, 2013).

The same can be said concerning curriculum planning documents that are being implemented by teachers, such as resource books, frameworks, and syllabuses (Marsh, 2007). Even though importance is attached to these documents in the learning phases, the primary concern is in the knowledge acquired and the skills and concepts that are measured with summative assessment (Marsh, 2007).

Poor infrastructural facilities is another factor that challenges teacher implementation of formative assessment practice (Edinyanget al., 2014). Poor confidence level on the part of the teachers is another challenge that cause formative assessment strategies to be implemented infrequently (Odo, 2013). Also, the limited time allotted to each subject in the school timetable is another factor hindering the implementation of formative assessment practice feedback in Nigerian classrooms (Marsh, 2007). The next section presents some of the formative studies that have been carried out in Nigeria and some other African country.

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2.7 Empirical Studies on Formative Assessment

Studies on formative assessment abound in literature. For example, Perry (2013) cited a survey carried out by Akom (2010) on chemistry teachers in Cameroon which "discovered that the most common formative assessment practice used by the teachers was oral questioning, which was applied by 85.7% of the respondents". (Perry, 2013, p.96). When the teachers were observed in the classroom, the research found "that three assessment practices occurred most frequently in these observations: oral questioning, watching students complete independent work, and assigning homework, with oral questioning the dominant assessment method, a finding that aligns with the questionnaire data" (Perry, 2013, p.96). The research also investigated the participants' views on the kind of assessment information they used and collected. "The research found that 67.9% of teachers said that they used assessment data to improve teaching and 71.4% of teachers formatively assessed students to find out their understanding of particular concepts" (as cited in Perry, 2013, p.94).

Kanjee (2009) and Kapambwe (2010) carried out an investigation on the effect of giving teachers training on the implementation of formative assessment practice in South Africa. The research carried out by Kanjee (2009) focused on the literacy and numeracy Assessment Resource Bank (ARB) booklets on students' tasks. The ARB was purposely designed to assess students' learning by teachers in South Africa. The study found positive results in the instructional process by teachers in the classroom in three pilot studies of teachers. The study by Kanjee (2009) also discovered that teachers with more experience in teaching use better innovative approaches in discern the students' learning skills (Perry, 2013). In the same vein, Zambian teachers received extensive training in Kapambwe's research regarding the use of continuous assessment tools, including students' tasks and guides for teachers that corresponded with the standard of Zambia content. The research made use of 80% in observation and found that 65% of teachers gather information regarding student understanding concerning a topic by applying the ARBs (Perry, 2013).

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Oti, Ariya and Salau (2020, p.365) investigated the "effects of formative assessment strategy on Post Basic Students' Attitude and Achievement in Social Studies in Katsina Metropolis, Nigeria". The result of the investigation shows that student indicate positive attitude toward social studies. The findings revealed that "while the pre-test and post-test Social Studies achievement of students in the control group, as well as the pre-test scores of students in the experimental group were generally low, the post-test scores of students in the experimental group is higher than students' pre-test scores" (Oti et al.,2020, p.368).

In Nigeria, research carried out by Udoukpong and Okon (2012, p.204) found that students' "academic performance in social studies in Junior Secondary Certificate Examination (JSCE) differed significantly based on their perception of teachers' formative evaluation practices". The finding of the study is to the effect that student's perception of their teacher has an impact on the students' performance. Clearly, with a positive perception comes an enhanced performance while a negative perception drives a negative performance and learning outcome. It is therefore imperative that students must construct a positive performance of the teachers techniques as this would enhance positive learning outcome and improve quality of learning.

Another research study carried out by Emeasoba (2016, p.323) in Nigeria to "identify the principles of formative learning and the strategies to be adopted in formative learning". The study showed that formative assessment promotes life-long learning and enhances performance by students. Additionally, it was shown that engaging students in the learning process enables the student to build and enhance capacity while developing personal strategies.

According to Olagunju (2015)

> it was found that formative assessment has a strongly significant difference in the mean achievement score of mathematics students that are exposed to it (t = 36.54, p=000) while there is no significant difference in the mean achievement scores of students who are not exposed to formative assessment (t=2.053, p=0.045). Also, there is no gender difference in Mathematics scores

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of students that are exposed to formative assessment (t=0.112, p = 0.053). Olagunju (2015, p.2).

Ugodulunwa and Okolo (2015, p.38) also examined “formative assessment on Mathematics test anxiety and Mathematics performance using a quasi-experimental design” in Nigeria. The finding that the performance of students taught using formative testing is better implies that students can be brought to mastery of the subject matter through the adoption of formative testing. Ajogbeje, Ojo and Ojo (2013, p.94) further investigated “the effect of formative testing, with feedback as an instructional strategy, on junior secondary school students' achievement”. The research reiterated students attitude. Also, Akanbi (2012) found that formative testing improved students’ performance in accounting. Analysis of the gender effect showed no significant effect on the students’ performance, however formative testing has a significant effect on students’ appraisal in accounting (Adeyemi & Adeyemi, 2014).

Dibu-Ojerinde (2005, p.355) surveyed “specific formative assessment practices of 300 private secondary school teachers in Osun, Nigeria”, and found that teachers engaged with the technique of formative assessment differently and achieved varying results through a mixed- method research. Omeje and Eyo (2008, p.154) investigated the value in universities. Their findings elicited a strong link between the value system and quality of university education in Nigeria.

An investigation on “an assessment on the impact of the Formative Assessment Module of the Web-based Assessment and Test Analysis System (FAM-WATA)” was carried out by Wang (2007, p.207). The “FAM-WATA is a multiple-choice Web-based formative assessment module containing six formative strategies: repeat the test, correct answers not given, query scores, ask questions, monitor answer history, and pass and reward”. “All forms of formative assessment resulted in significant student gains, with the FAM-WATA group outperforming the normal Web-based formative assessment and the pen and paper formative assessment groups.”

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From the preceding section, it is the researcher's view that teachers should find ways of giving each child the help, encouragement and opportunities needed to enhance learning. Oti et al. (2020, p.369) concur with the fact "that students who are taught using formative assessment, perform better than those taught using the conventional method". The studies from other African countries indicate that formative assessment is regularly practiced in the classroom more with oral questioning. Perry (2007, p.101) claims that in "Ghanaian teachers utilize students' facial expressions to gauge whether students understand a lesson". However, none of the above studies has been carried out on teachers' practices and the value of formative assessment in Nigerian primary schools, particularly in Kwara and Lagos states of Nigeria, hence this study.

2.8 Conceptual Framework

This study relies on the framework by Warwick et al. (2015), as it helps to provide reliable suggestions regarding how teachers value the use of formative assessment practice that ensures quality education and the intended learning outcomes. The framework is adopted to help promote and enhance successful implementation of assessment for learning. Black and Wiliam (2009, p. 5) posit that formative assessment's five key teaching strategies are "significant in the development of students' ability to learn; how to learn; and students' autonomy". The position is further supported by the claim of Kuze and Shumba (2011) that students' improvement depends on their effort rather than how clever they are. The conceptual framework is guided by the formative assessment teaching five key strategies. It is important before proceeding to bring to the fore the importance of value and its link to the conceptual framework of this research. As already noted, scholars like Omeje and Eyo (2008) opine that value helps shape attitudes and approaches to learning, teaching, and carrying out of one's duty and responsibilities. According to Warwick et al. (2015, p.41) "formative assessment has been conceptualised as consisting of five key strategies which are intended to provide reliable information upon which both teachers and students can act upon to advance student learning". Formative assessment is used overall to drive an outcomes-based output in education (Boston, 2002).

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Table 1: Formative Assessment Teaching Strategy

Actor	Where the students are going	Where the students are right now	How to get there
Teacher	**1** Clarifying learning intentions and criteria for success	**2** Engineering effective classroom discussion and other learning tasks that elicit evidence of student understanding	**3** Providing feedback that moves learners forward
Peer	Understanding and sharing learning intensions and criteria for success	**4** Activating students as instructional resources for one another	
Student	Understanding and sharing learning intensions and criteria for success	**5** Activating students as owners of their own learning	

Source: Warwick et al. (2015)

These formative assessment teaching strategies, according to Warwick et al., (2015) are designed to foster the students' meta-cognitive learning during the instruction process. "The formative assessment teaching strategies are strongly connected to the social constructivist perspective regarding learning, which emphasises the relationship between individual cognitive development and collective reasoning that is between the internment, usually facilitated by talk and the intra-mental construction of knowledge and understanding" (Warwick et al., 2015,p.42).

Further, the foundation of the formative assessment teaching strategy brings to the fore the involvement of students and the reflection of teachers as the professional central in the practice of formative assessment implementation (Warwick et al., 2015).

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2.9 Appraisal of Literature Reviewed

Much research has been carried out regarding formative assessment practice both locally, nationally, and internationally. The meaning of assessment, formative assessment, and the benefits and challenges of formative assessment were discussed, as well as differences between formative and summative assessment. The historical background, the conceptual and theoretical framework, teachers' values and practices, of formative assessment were also discussed (with reference to Black & Wiliam, 2009; Idowu & Esere, 2009; Kuze & Shumba, 2011 among others).

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Chapter Three:

Research Methodology

"There is no doubt that primary education is the foundation upon which the rest of the education system is built"

-Awofala (2012)

3.1 Introduction

Chapter Three discusses the design of the study and addresses the study objectives, sampling strategies and the data collection instruments. This research was conducted with the focus of interrogating the value and practice inherently different between the concepts of formative assessment practice by teachers that teach in the primary school education system. The research investigates the way teachers' value and practice the implementation of formative assessment practice during the instruction period. Chapter three also examines the scope of implementation of assessment technique.

This study was conducted using selected primary schools in Lagos and Kwara States in Nigeria. The schools and teachers were selected to ensure that all categories and genders of teachers were adequately represented. A total of 120 teachers were selected from primary schools in the two states.

A structured and coded questionnaire was used for data collection on whether the teachers practise and how they value formative assessment practice in their teaching and instruction. A quantitative research methodology, using both descriptive and inferential statistics was used to analyse the data and interpret the results. Details of the methodology and research instruments used are presented in the sections that follow. Section 3.2 discusses the design of the research. Section 3.3 deals with the study population, the sampling technique, and the instrument for data collection. Section 3.4 deals with the data collection procedure and the data analysis techniques. Section 3.5 deals with the reliability and validity of the data. Section 3.6 presents and discusses the ethical consideration, and lastly, Section 3.7 discusses the limitations and challenges of the study.

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3.2 Epistemology

Antwi and Hamza (2015,p 218) suggested that “a research inquiry should be based on the concepts of ontology (the way the investigator defines the truth and reality), epistemology (the process in which the investigator comes to know the truth and reality) and methodology (the method used in conducting the investigation)”. This study used the epistemology research paradigm. According to Antwi and Hamza (2015, p.219) “epistemology refers to the nature of the relationship between the researcher (the knower) and it denotes the nature of human knowledge and understanding that can possibly be acquired through different types of inquiry and alternative methods of investigation". Bahari (2010, p.22) defined “epistemology as the theory of knowledge and concern of what is considered as acceptable knowledge in a particular discipline”. This study is approached from the positivism framework, which will help to objectively answer the research questions.According to Bahari (2010,p.22) “positivism assumes that there are social facts with an objective reality apart from the beliefs of individuals that knowledge is only of significance if it is based on observations of this external reality”.

In a positivism-based epistemology, measuring something through questionnaires is about people’s perception and attitude which is objectively measurable. The positivism paradigm was used because the study looks at the differences between the value teachers place on formative assessment versus the implementation of formative assessment by the teachers in their classroom. The positivist researcher believes that the world that exists can be knowable and discovered by using quantitative methodology (Tuli, 2010).

Bahari (2010) defined ontology as the phenomenon of social and natural theory regarding reality. The study’s ontology uses computed measures to quantify and observe the cohort of teachers’ knowledge regarding the value and practice of implementing formative assessment with a questionnaire. The use of the questionnaire aided the researcher to discover the difference (if any) between how teachers value and practise the formative assessment teaching strategy in the classroom.

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3.2 Design of the Research

A survey design was used, according to Kelley, Clark, Brown, and Sitzia (2003) generally refers to the use of a group of selected people that have a common interest from a pre-determined population. Furthermore, Dulock (1993) states that a descriptive survey is done to gather information about an individual or group of people's character, opinion and attitude regarding a situation such that the data collected when analysed can provide in-depth knowledge of the construct under investigation. Consequently, the data obtained from a group or sample of the chosen population in a survey design can represent the entire population (Maree, 2016).

In view of the above, two states namely Lagos and Kwara States with large populations of primary schools were chosen. Eleven primary schools in the two states were selected by a convenience sampling method. Within the 11 primary schools, 120 teachers with many years of teaching experience were then selected by purposive or judgment sampling and completed a structured and coded questionnaire on their value and practice of formative assessment.

3.3 Sample and Sampling Technique

According to Trochim (2020, p.1), "Sampling is the procedure of selecting a unit (people, organization) from a population of interest so that by studying the sample we may fairly generalize our results about the population from which the sample was chosen".

The research used a convenience sampling method to reach the teachers that participated in the study. The convenience sampling method was used to get teachers who are conveniently available to participate in the research. Teachers teaching in primary schools both in Lagos and Kwara States were selected as the targeted population for this study because of feasibility, scope, and easy accessibility due to geographical proximity. A convenience sample is a non-probabilistic technique in which a researcher selects the target population that meet specific criteria, such as the willingness to participate and availability (Etikan, Musa, & Alkassim, 2016). An overall sample of 120 teachers from 11 primary schools in Lagos and Kwara States was selected to participate in this research.

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Teachers who had over three years teaching experience were used in the research because of their knowledge in teaching and years of experience in the value and practice of formative assessment during the teaching and instruction period.

The study also focused only on teachers teaching in Primary Six classes because it is an exit point in primary school education. In addition, students in this class, who are preparing to get admitted into junior secondary school, should not be assessed only on their cognitive ability to pass the entrance exam. As Elui and Studies (2008) put it, test items help to assess the level of the application of a wide range of intellectual skills, like working with numbers, reading comprehension, abstract thinking, ability to acquire new information, and how to find solutions to problems.

3.4 Method of Data Collection

The data for this research was collected with an already existing questionnaire survey instrument (see Appendix A). The questionnaire was originally designed by James and Pedder (2006) to explore assessment value and practice among teachers in Western and non-Western contexts (Warwick, 2015). This research study adopted the existing questionnaire, which was designed purposely to obtain information about teachers' views on teaching and beliefs concerning formative assessment value and practice, using Likert scale type of responses.

The research used a structurally developed and validated questionnaire, designed to measure teachers' value and how they practice formative assessment implementation in classrooms. A questionnaire helps to guarantee anonymity, it is more accurate in generalisability, and appropriate for probability sampling, which is a sampling method that brings about representativity (Nardi, 2018), although not applicable to this study. The use of a questionnaire may also reduce the amount of rigorous labour when collecting data.

Structured questionnaire was considered appropriate for this study because the questions are standardised. Furthermore, it is an affordable method to use for gathering data, especially when there is limited time, more so if the population is large (Nardi, 2018).

The distribution of the questionnaire was achieved by engaging the networks the researcher had built during the course and development of her teaching career, such as

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at seminars, focus group discussions and workshops. Enough questionnaires were given to the schools that took part in the research, along with the consent letters signed by the participants for the pilot study. The pilot process was done to evaluate feasibility, duration, cost, adverse events, and to make sure the respondents understood the contents of the questionnaire. The various schools that participated had an arrangement with the researcher on when and how to administer the questionnaires. The questionnaires were also administered to some of the respondents during prearranged meetings with the teachers after the close of schools to avoid interrupting the instruction process.

Table 2 presents formative assessment teaching strategies as presented in this study's conceptual framework and the questions from the questionnaire that are associated with the respective strategies.

Table 2: Formative assessment teaching strategies and associated questions

No	Strategies	Questions
1	Clarifying and sharing learning intentions and criteria for success.	21,11 & 28
2	Engineering effective classroom discussions and other learning tasks that elicit evidence of student understanding.	1, 2, 3,7, 8, 18, 23 & 25
3	Providing feedback that moves students forward.	4,5,10,12 &22
4	Activating students as instructional resources for one another.	19 & 29
5	Activating students as the owners of their own learning.	6, 9, 14, 15, 16, 17, 24, 26, 27, 15, &30

The table shows questions in the teachers' questionnaire that are linked to respective formative assessments teaching strategies. The formative assessment teaching strategies presented in Table 2 shows that Nigerian primary school teachers should engage with students in the following areas: "clarifying and sharing learning intentions

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and criteria for success; engineering effective classroom discussions and other learning tasks that elicit evidence of student understanding; providing feedback that moves learners forward; activating students as instructional resources for one another; and activating students as the owners of their own learning" (Warwick et al.,2013,p.17; Black & Wiliam 2009,p.8 ; Warwick et al., 2915; Antoniou & James, 2014). For each strategy, several related questions are drawn and included in the questionnaire administered to the teachers.

3.4.1 Description of the Instrument

The questionnaire for this research consists of four-point Likert scale type statements with a dual format. The dual format are two independent samples obtained from the questions with four-point Likert scale type statements (Wiest, Olive & Obenchain, 2003). This dual format deals with the difference between teachers' practice and their value of formative assessment. The scale is used to help the researcher discover views or attitudes and to measure the respondents' agreement with a variety of statements (Maree, 2016).The options available to the respondent are: "strongly agree" and "strongly disagree" with no room for neutrality (Maree, 2016).

The questionnaire consisted of two sections, namely Section A and Section B. Section A consisted of 30 survey questions. Section B consisted of the teachers' personal information, gender, the name of their school, years of teaching experience, post and responsibility, years at current school, and area of responsibility. Table 3 presents a section of the questionnaire while the complete questionnaire is attached as Appendix A.

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Table 3: The research instrument

Scale X **Your assessment practices** **(About You)**				**Section A** **Assessment practices**	**Scale Y** **How important are assessment practices for creating opportunities for students to learn?** **(About your values)**				
Never true	Rarely true	Often true	Mostly true		Not at all important	Of limited importance	Important	Crucial	Bad practice
				Assessment provides me with useful evidence of my students' understandings which I use to plan subsequent lessons.					
				The next lesson I teach is determined more by the prescribed curriculum than by how well my students did in the last lesson.					
				The main emphasis in my assessments is on whether my students know, understand or can do prescribed elements of the curriculum					
				The feedback that my students receive helps them improve.					
				Students are told how well they have done in relation to others in the class.					

Source: Warwick et al. (2015)

In the table Scale X , which dealt with the assessment practice comprises of headings: 'never true', 'rarely true', 'often true' and 'mostly true', while Scale Y, which dealt with how they value assessment comprises of: 'not important', 'of limited importance', 'important', 'crucial' and 'bad practice'. Every aspect of the formative assessment conceptual framework is related to a question in the questionnaire. Teachers were told to tick one

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box in each of the scale axes for every question in the questionnaire. Likert scale type questionnaires, according to Nemoto and Beglar (2014), are commonly used because they measure individual differences and they allow the researcher to collect large quantities of data at a low cost within a short period of time. A Likert scale questionnaire is an instrument that provides an ordinal measure of a respondent's attitude, opinions, and feelings concerning a topic (Maree, 2016). One of the advantages of a Likert scale questionnaire is that data can be collected quickly from many participants, thereby allowing for faster feedback from the participants (Nemoto & Beglar, 2014). The Likert scale eliminates bias and it is relatively easy and quick to use (Nemoto & Beglar, 2014). The questionnaire is a standardised, uniform instrument, which is less stressful to respondents and provides immediate responses (Delice, 2010). The major disadvantage of the Likert scale is that only literate respondents can respond to it (Delice, 2010). Another disadvantage of the Likert scale is that it is highly susceptible to missing data scenarios (Delice, 2010).

3.4.2 Process of Data Collection

The questionnaire was given to the teachers and data was collected from the various schools that participated in the research at times and locations arranged with the researcher. The researcher explained to the participants the reason for the research and how they would complete the questionnaire. Because the questionnaire was coded, the teachers simply ticked the boxes to their choice of the options to the questions in the questionnaire. Table 4 presents the full description of the procedure of collecting the data.

Table 4: Data Collection Process

School	Data Collection Process	Date
1	Data was collected after the end of school. The respondents all gathered in the staff room and the researcher administered the questionnaire to them.	19 March 2019

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2	The researcher was told to give the respondents the questionnaires and return to collect them the next day.	19 March 2019
3	The researcher dropped the questionnaire with the principal, who promised to give them to the teachers during the break period.	20 March 2019
4	The researcher was told to give the respondents the questionnaires and return to collect them the next day.	20 March 2019
5	The teachers completed the forms while the researcher waited in the head teacher's office.	30 April 2019
6	The researcher was told to give the respondents the questionnaires and return to collect them in two days.	02 May 2019
7	The principal collected the questionnaires, asked the assistant head teacher to distribute the questionnaires to the respondents, and gave the researcher a date to come back and collect the completed questionnaires.	08 May 2019

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10	The principal collected the questionnaires and asked the assistant headteacher to distribute the questionnaires to the respondents and gave the researcher a date to come back and collect the completed questionnaires	28 May 2019
11	The researcher was told to give the respondents the questionnaires and return to collect them in a week's time.	05 June 2019

The data collection process was successful but somewhat stressful because it involved moving from one school to another in relatively short period of time. The researcher collected the completed questionnaires in less than three months after administering the questionnaires. Microsoft Excel was used to capture and verify the captured data and it was found to be error free. The next section presents the analysis of the data.

3.4.3 Data Analysis Process

The analysis was done with the use of Microsoft Excel and SPSS 21 (Statistical Package for Social Sciences: Version 21). Both descriptive and inferential statistical methods were used to analyse and present the data. "Descriptive statistics is a collective name for several statistical methods that are used to organise and summarise data in a meaningful way" (Maree, 2016,p.204). The descriptive statistics were in the form of tables, charts, means, mode, medians, and percentages. Inferential statistics is done purposely to use the findings from the data analysis to generalise or draw a conclusion about the population (Maree, 2016). The inferential statistics used is the Wilcoxon Signed-Tank Test since the data was not normally distributed. Non-parametric analyses were therefore warranted.

Maree (2016) explains that the Wilcoxon Signed-Rank Test is a non-parametric statistical tool used to compare two variables in a single sample to find out the differences between two scores. The Wilcoxon test has been proven to provide quality assurance in measuring student performance in different fields (Leung, Mok & Wong, 2008). In this study, the test

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was performed on one variable, which was the difference between the teachers' practice and the value they assign to formative assessment implementation. In this regard, the differences between teachers' scores for value and their scores for practice were calculated. The absolute values of the differences were then ordered with the smallest difference ranked first, while the greatest difference was ranked last. The values of the absolute differences were then ordered, and the median was found.

The Wilcoxon Test essentially tests the null hypothesis (Ho) that the median of the absolute differences is zero against an alternative hypothesis (Ha) that the median is not equal to zero, as follows: **

Ho: Median =0 Ha: Median ≠ 0

The test statistics were used to compare the probability value obtained against 1%, 5%, and 10% levels of probability. A probability value (p) not equal to zero implies that we reject the null hypothesis (Ho), showing that there is a significant difference between teachers' value and practice of formative assessment implementation.

Thus, for probability values ($p \leq 0.01$), it is concluded that the median of the difference between the two responses is significant at the 1% level of probability. In other words, one is 99% sure that there is a difference between teachers' value and their practice of formative assessment implementation. Values of ($p \leq 0.05$) and ($p \leq 0.10$) imply that the median of the difference between teachers' value and their practice of formative assessment is significant at the 5% and 10% levels of probability, respectively. Data gathered were analysed with the help of a statistician from the University of Ilorin, Ilorin, Nigeria.

3.5 Quality Criteria of the Study

3.5.1 Validity and Reliability

The precedent questionnaire designed by James and Pedder (2006) which was deployed in England to collect data from teachers regarding value and practice on formative assessment, modified by Warwick et al., (2015), was adopted in this research. The questionnaire was adopted in this research to gather information from primary school

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teachers in 11 primary schools in Lagos and Kwara States of Nigeria concerning their practice of and the value they place on the implementation of formative assessment in their teaching.

To determine the validity of the data, construct validity could have been employed to ensure specific measurement of the intent of the research and the degree to which a test measures what it claims or purports to be measuring. Construct validity deals “with how well the construct covered by the instrument is measured by different groups of related items” (Maree, 2016,p.240). The reliability of the instrument was determined with Cronbach Alpha values. Reliability coefficients of 0.83 and 0.79 were obtained for variables “X” and “Y” respectively, using Cronbach’s alpha coefficient, based on the single administration of the instrument.

3.6 Ethical Considerations

The need to adhere to the ethical consideration before embarking on the research is fundamental (Maree, 2016). The ethical clearance was sought and obtained before carrying out this study.

3.6.1 Ethical Clearance

Ethical clearance was applied for from the University of Pretoria Ethical Committee and Faculty of Education by the researcher. The researcher completed the necessary document and explained in detail the purpose of the study. The letters addressed to the primary schools ‘headmasters or headmistresses, and teachers as well as the consent form were also submitted to the Ethics Committee for scrutiny. The Faculty of Education Ethics Committee and the Faculty of Education at the University of Pretoria granted the researcher permission to carry out the research.

The researcher took the letters addressed to the primary schools ‘headmaster/mistress and consent form to all the schools to seek their permission to conduct the research soon after the ethical clearance was obtained.

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3.6.2 Permission from the School Headmaster / Mistress

The researcher took the letters and the consent forms to the various primary schools' headmasters/headmistresses to seek permission for their teachers to participate in the research (see Appendices B to E). The researcher obtained permission to carry out the study from the respective headmasters or headmistresses of the various schools that participated in the research study after explaining the purpose of the study in detail.

3.6.3 Voluntary Participation and Informed Consent Form

The primary school teachers voluntarily agreed to participate in the research after the researcher had explained the reason for the study. The letter of consent to take part in the research was first signed by the teachers before they were given the questionnaire to complete. The details of the researcher and those of the supervisor were fully provided in the participants' consent form in case there is need to contact them.

The researcher also told the participants that they could withdraw at any point if they did not want to continue with the research. The privacy and confidentiality of the participants were also guaranteed. The researcher also made the participants understand that the research would be used for the intended purposes and would not compromise their identity or confidentiality. Pseudonyms were used to conceal the participants' real names and only the researcher and the supervisor would have access to the raw data.

The participants were further informed that the result of the finding would be disseminated through a focus group discussion, a workshop, and a seminar to deepen their knowledge concerning the implementation of formative assessment practice. The research was carried out and data collected only in the various schools that gave their consent to participate in the study. Thus, the teachers' knowledge regarding assessment was willingly volunteered by them and not plagiarised.

3.7 Limitations and Challenges

The original questionnaire was normed and standardised on an English population in the United Kingdom. This research was also carried out only in the identified primary schools in two states in Nigeria, Lagos and Kwara. The research was carried out in these two

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states only because of proximity, funds, and time. Additionally, the participants in the research were also limited to primary school teachers in the rural areas.

3.8 Summary

In summary, the research was carried out in selected primary schools in Lagos and Kwara States in Nigeria. It was aimed at investigating teachers' differences in value and practice of formative assessment in Nigerian primary schools. Primary data was used in the study and both descriptive and inferential statistics were used to analyse the data and present the results. Relevant ethical considerations were observed in the course of the study. Chapter Four presents the details of the data analysis, findings, and discussions.

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Chapter Four:

Data Analysis and Findings

"The collaborative engagement of teachers and students in assessment for learning processes makes methods and means of learning an explicit and critical focus of classroom interaction and enquiry among students and between students and teachers".

-James and Pedder (2006)

4.1 Introduction

The research aimed at investigating the differences in teachers' value and practice of formative assessment in teaching and learning. The study also sought to find the scope to which teachers use formative assessment, the teaching strategy for formative assessment practice and the difference between the teachers' assessment practices and values. The analysis of data, findings and discussions in this study are made with both descriptive and inferential statistics. One hundred and twenty respondents in total completed the questionnaire by ticking relevant boxes in the two scales (X and Y) in the questionnaire. Details of the questionnaire were presented in Chapter Three. All 120 respondents completed the questionnaire and left no questions unanswered, and hence there are no missing data.

Section 4.2 presents respondents' demographic profile; Section 4.3 presents the description of the formative assessment dimensions; and Section 4.4 presents the descriptive sections that answered the research questions. Finally, Section 4.5 presents the summary of the results.

4.2 Demographic Profile of the Respondents

Description of the respondents sampled in this study is done in terms of:

- The gender of respondent teachers
- Years of teaching experience of the teachers
- The post and responsibility of teachers

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Table 5 presents the demographic profile of the teachers that participated in the study:

Table 5: The Respondents' Demographic Profile

Gender	Number	Percentage (%)
Female	61	50.8
Male	59	49.2
Total	120	100.0

Table 5 shows that of the teachers that participated, 50.8% were female while 49.2% were male. Table 6 presents the years of teaching experience of the teachers that participated in the study.

Table 6: Years of Teaching Experience

Teaching Experience	Number	Percentage (%)
1-5 years	32	26.7
6-10 years	60	50.0
Above 10 years	28	23.3
Total	120	100.0

Table 6 shows that 32 teachers or 26.7% of the total number of teachers have 1-5 years of teaching experience; 50.0% of the respondents have been teaching for six to ten years while teachers with teaching experience of over ten years constitute 23.3% of the total. Table 7 presents the post and responsibility of the teachers.

Table 7: Post and Responsibility of Teachers

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Post and Responsibility	N	Percentage (%)
Subject teacher	65	54.2
Subject teacher with management responsibilities	15	12.5
Head of department	14	11.6
Head teacher	21	17.5
Other	5	4.2
Total	120	100.0

Table 7 reveals that 54.2% of the teachers were subject teachers, meaning that they only teach the subject that has been assigned to them; 12.5% are subject teachers with management responsibility who have an additional workload apart from teaching in the classroom, a typically Nigerian phenomenon; and11.6% of the respondents are Heads of Departments. Further, 17.5% of respondents are headteachers, who also oversee the work of other class teachers. The remaining 4.2% of the respondents have other posts and responsibilities, like class assistants in activities like marking of class work and preparing homework. Section 4.3 presents the five formative assessment teaching dimensions.

4.3 Description of the Formative Assessment Teaching Dimensions

Many primary school teachers in Nigeria prefer to assess the students using summative assessment methods at the end of the instruction period. The use of summative assessment by most teachers is due to limited time, the need to cover the syllabus, large class sizes, and lack of full knowledge of formative assessment. Therefore, there is a need for teachers to understand the teaching strategy dimensions of formative assessment to be able to adopt its practice in the class. Table 8 provides the five key

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teaching strategy dimensions of formative assessment and how they are linked to the questions in the questionnaire.

Table 8: Teaching Strategy Dimensions

No	Teaching Strategy Dimension (D)	Question numbers
1	Clarifying and sharing learning intentions and criteria for success	21,11 & 28
2	Engineering effective classroom discussions and other learning tasks that elicit evidence of student understanding	1, 3, 20, 18, 2, 7, 25, 23 & 8
3	Providing feedback that moves students forward	4,5,10,12 & 22
4	Activating students as instructional resources for one another	19 & 29
5	Activating students as the owners of their own learning.	6, 9, 13, 14, 15, 16, 17, 24, 26, 27 & 30

Source: Warwick et al., 2015

Table 8 indicates how each question in the questionnaire is linked to each teaching strategy dimension. (See Appendix A for a complete version of the questionnaire as it was administered to respondents).

The five formative assessment teaching strategies dimensions are presented in Table 9 to Table12, all covered by the questions answered by the respondents.

Formative Assessment Teaching Strategy Dimension One (D1): “Clarifying and sharing learning intentions and criteria for success”, was evaluated by aggregating the responses obtained from teachers on statements 11, 21 and 28, which are linked to D1, and

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presenting it with a bar chart. Table 9 shows the questions attached to teaching strategy D1.

Table 9: Clarifying and Sharing Learning Intentions and Criteria for Success

Number	Question
11	Students' learning objectives are discussed with students in ways they understand.
21	Students are helped to understand the learning purposes of each lesson or series of lessons.
28	Assessment criteria are discussed with students in ways that they understand.

Figure 2 shows the frequency and percentages of statements associated with clarifying and sharing learning intentions for success with the students by the teachers.

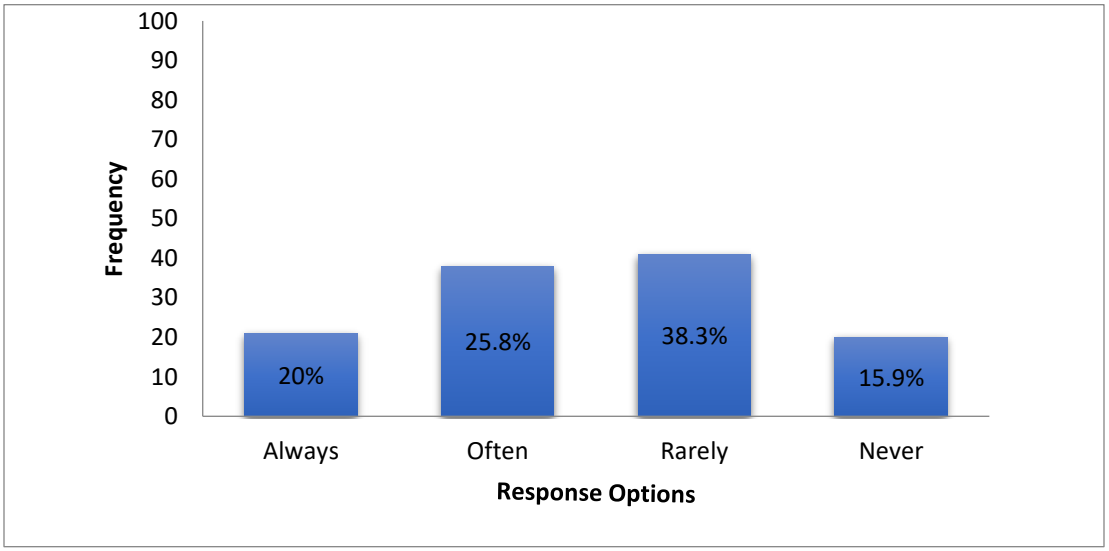

Figure 2. Clarifying and sharing learning intentions and criteria for success

The results in Figure 2 show that 38.3% of the respondents rarely clarify and share learning intentions. Just over a quarter of teachers (25.8%) often clarify and share learning intentions and criteria for success with their students, while 20% of the respondents always clarify and share learning intentions with their students. A

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comparatively small percentage of 15.9% of the teachers never clarifies or share learning intentions with their students. The result indicates that only one-fifth of the teachers always practise formative assessment by adopting the strategy of clarifying and sharing learning intentions as well as criteria for success with their students, while others do so less often, and some do not do so at all.

Formative Assessment Teaching Strategy Dimension Two (D2), “Engineering effective classroom discussion and other tasks that elicit evidence of students’ understanding”, was evaluated by aggregating the responses of teachers on questions 1,2,3,7,8,18,20,23, and 25 associated with D2. Table 10 shows the questions attached to D2 that were aggregated, while Figure 3 illustrates these findings graphically.

Table 10: Engineering Effective Classroom Discussion and other Tasks that Elicit Evidence of Students' Understanding

Number	Question
1	Assessment provides me with useful evidence of my students understanding which I use to plan subsequent lessons
2	The next lesson I teach is determined more by the prescribed curriculum than by how well my students did in last lesson
3	The main emphasis in my assessments is on whether my students know, understand or can-do prescribed elements of the curriculum
7	I use questions mainly to elicit factual knowledge from my students
8	I consider the most worthwhile assessment to be assessment which is undertaken by me
18	I use questions mainly to elicit reasons and explanations from my students
20	Students’ errors are valued for the insights they reveal about how students are thinking

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23	Students' learning objectives are determined mainly by the prescribed curriculum
25	The main emphasis in my assessment is on what students know, understand, and can do

Figure 3 shows the frequency and percentages of the respondents who engineer effective classroom discussion among their students.

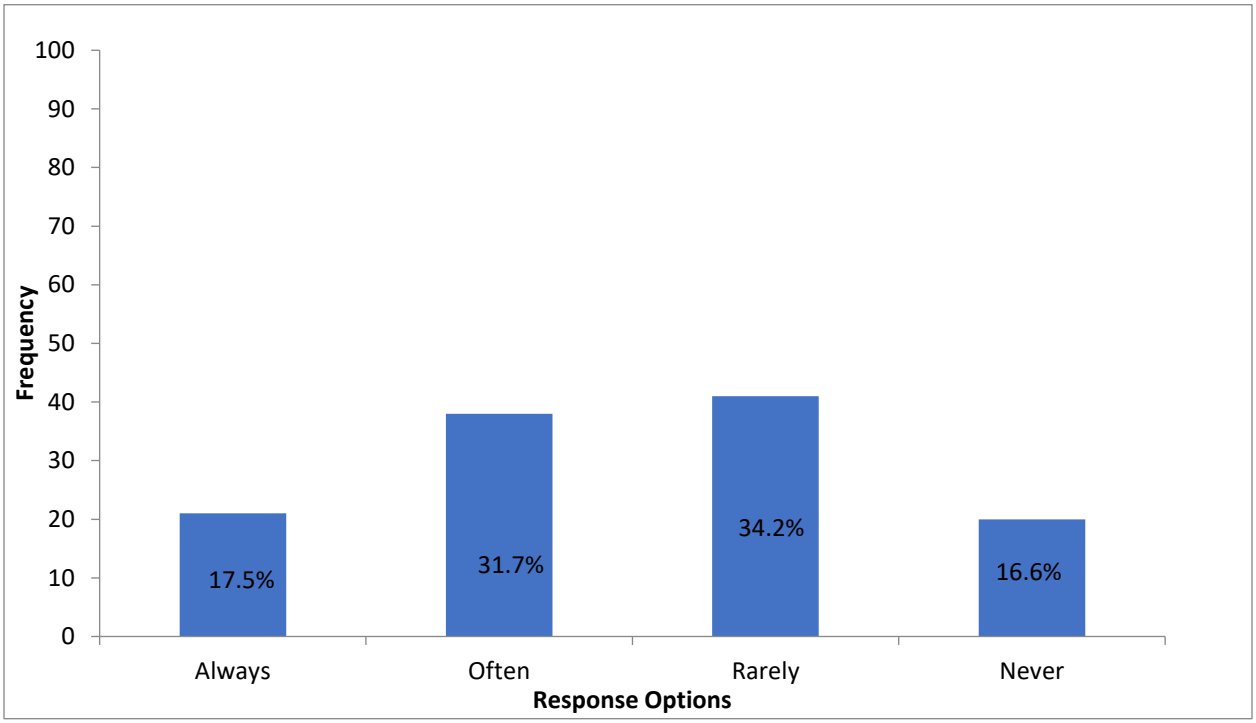

Figure 2: Engineering Effective Classroom Discussion and Other Tasks That Elicit Evidence of Students' Understanding

The results shown in Figure 3 illustrate that 17.5% of the teachers always engineer effective classroom discussion and other tasks that elicit evidence of students' understanding. Also, only 31.7% of the respondents often practise formative assessment by engineering effective classroom discussion. Further, 34.2% of the respondents rarely practise formative assessment by engineering effective classroom discussion while 16.6% of the respondents never practise formative assessment by engineering effective

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classroom discussion. From the results, the percentage of teachers who always engineered effective classroom discussion is close to the percentage of the teachers who rarely or never do. The result indicates that on an average, 49.2% of the teachers practise and 50.8% teachers do not practise engineering classroom discussion among their students.

Formative Assessment Teaching Strategy Dimension Three, "Providing the feedback that moves the students forward", was assessed by aggregating the responses of teachers on questions 4, 5, 10, 12, and 22 in the questionnaire, which are linked to dimension three (D3). Table 11 shows the questions attached to dimension three.

Table11: Providing Feedback that Moves the Students Forward

Number	Question
4	The feedback that my students receive helps them improve
5	Students are told how well they have done in relation to others in the class
10	Students are told how well they have done in relation to their own previous performance
12	Assessment of students' work consists primarily of marks and grades
22	Assessment of students' work is mainly in form of comments

Figure 4 shows the frequency and percentages of the extent to which the respondents provide feedback that moves the students forward during teaching.

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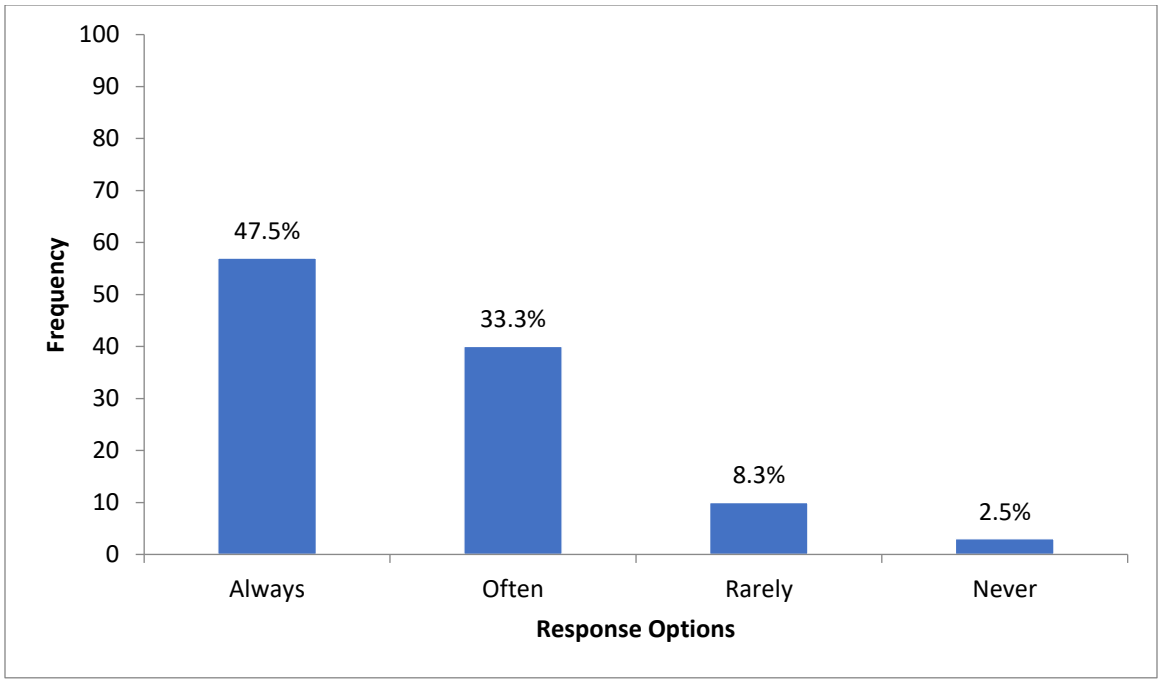

Figure 3: Providing Feedback That Moves Students Forward

Figure 4 shows that 47.5% of the respondents always provide feedback that moves the students forward while33.3% of the respondents often provide feedback that moves the students forward. Only 8.3% of the teachers reported 'rarely' providing feedback that moves the students forward while 2.5% of the respondents never provide feedback to students. The result indicates that the teachers that adopt the formative assessment strategy of providing feedback that moves the students forward have the highest percentage of 47.5%.

Formative Assessment Teaching Strategy Dimension Four (D4): "Activating students as instructional resources for one another", was analysed by aggregating the responses of teachers on questions 19 and 29. These results are presented with the chart in Figure 5. Table 12 shows the questions linked to D4.

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Table 12: Activating Students as Instructional Resources for One Another

Number	Question
19	I provide guidance to help learners to assess one another's work
29	Learners are given opportunities to assess one another's work

Figure 5 shows the frequency and percentages of activating students as instructional resources for one another.

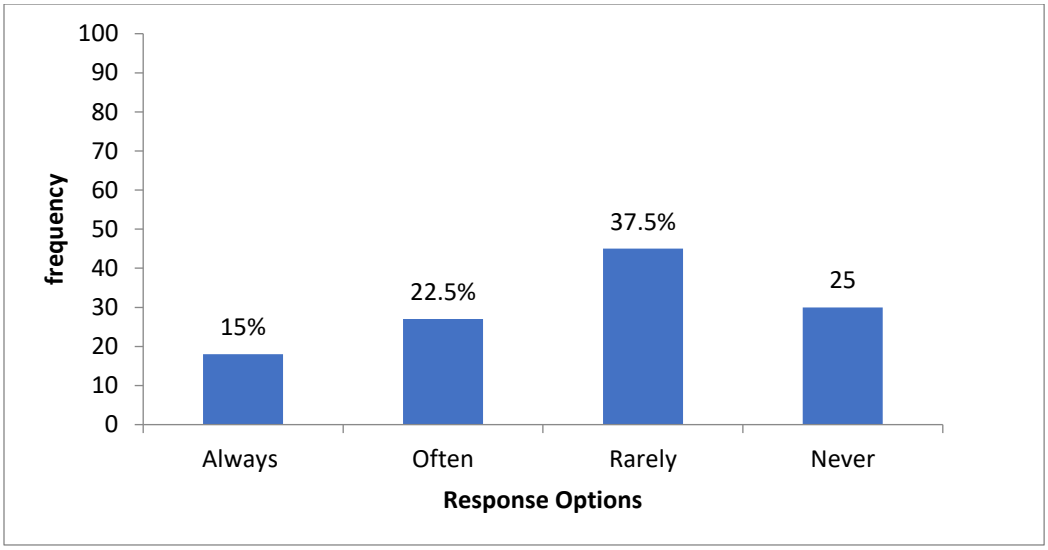

Figure 4: Activate Students as Instructional Resources for One Another

Figure 5 shows that 15% of the teachers always activate students as instructional resources for one another and 22.5% of the teachers often activate students as instructional resources for one another. However, 37.5% of the respondents rarely activate, while 15% of the respondents never activate students as instructional resources for one another. The result indicates that a greater percentage of teachers do not adopt the strategy of activating students as instructional resources for one another than those that adopt the strategy.

The last teaching strategy is "Activating students as the owners of their own learning". This dimension was analysed by aggregating the responses of teachers on questions 6,

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9, 12, 14, 15, 16, 17, 24, 26 and 30, which are linked to the last dimension (D5) in the questionnaire.Table13 shows the questions attached to this dimension.

Table 13: Activating Students as the Owners of their own Learning

Number	Question
6	Students are given opportunity to decide their own learning objectives
9	My assessment practices help students to learn independently
12	Assessment of students' work consists primarily of marks and grades
14	I identify students' strengths and advise them on how to develop them further
13	I provide guidance to help my students assess their own work
15	Students are helped to find ways of addressing problems they have in their learning
16	Students are encouraged to view mistakes as valuable learning experiences
17	Students are helped to think about how they learn best
24	I provide guidance to help students assess their own learning
26	Students are helped to plan the next steps in their learning
30	I regularly discuss with students' ways of improving learning and how to learn

Figure 6 shows the frequency and percentages of activating students as the owners of their own learning.

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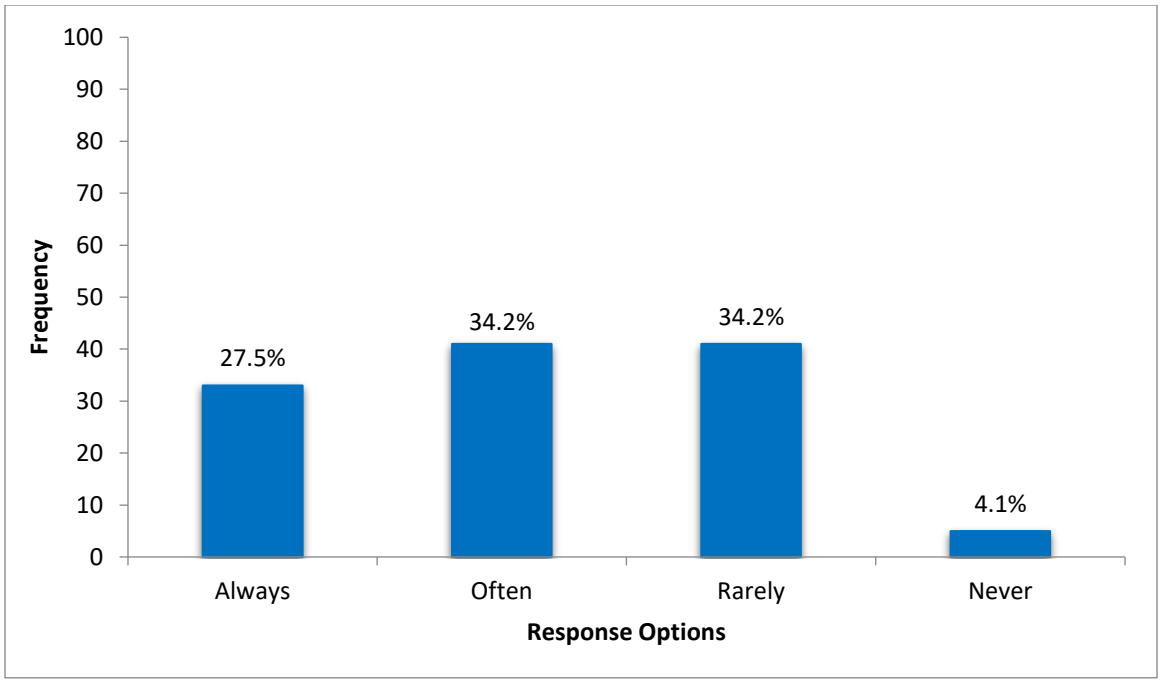

Figure 5: Activating Students as Owners of Their Own Learning

The findings as shown in Figure 6 indicate that 27.5% of the teachers always activate students as owners of their own learning while 34.2% of the teachers often activate students as owners of their own learning. However, 34.2% of the respondents rarely activate students as owners of their own learning, whereas 4.1% never activate students as owners of their own learning. From this result, it seems that while 61.7% of teachers reported using activation often in their teaching, a much lower percentage of 38.3% of the teachers still prefers to adopt teacher-centred teaching methods as opposed to student-centred methods. In the former, students are activated as instructional resources for one another.

4.4 Responses to the research questions

The questionnaire consisted of 30 Likert scale questions with four response options of ‘Always’, ‘Often’, ‘Rarely’ and ‘Never’. Participating teachers were asked to respond to each question in terms of the value they attach to a specific formative assessment activity and their perception of the practice of that same activity. The Likert scale questions were added to make up a composite score of reported practice of formative assessment. The total highest possible score for a teacher based on the 30 items is 120 (30 x 4) and the

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lowest possible score is 30 (30 x 1). The range is 90 (120-30) and $\frac{90}{4}$, which is 22.5. The range is obtained because of the number of questions to be answered, which is 30 in total with four classifications, therefore multiplying 30 by 4 results in 120. Hence, any respondent whose score on all the items falls within 30.0-51.5 is said to 'Never' practice formative assessment. A score range of 52.0-74.5 will indicate 'Rarely' practicing formative assessment, 75.0-96.5 will signify 'Often' practising formative assessment and 97.5-120.0 will indicate that the respondent 'Always' practises formative assessment. The same cut-offs for the practice's axes were used for the value axis of formative assessment of 'Crucial', 'Not Important and 'Bad Practice'.

4.4.1 Research Question One

Research Question 1 stated: "*What is the extent to which teachers practise formative assessment in Nigerian primary schools?"*

To answer the question, descriptive statistical methods were used to present a description of the extent to which teachers practise formative assessment in Nigerian primary schools. To answer the question, teachers' assessment practices from question 1 to 30 were used.

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Table 14. The Extent of Teachers' Practice of Formative Assessment

Extent of practice of formative assessment	Range of Scores	Frequency	Percentage (%)
Always	97.5-120.0	22	18.3
Often	75-97.5	29	24.2
Rarely	52.6-75	46	38.3
Never	30.0-52.5	23	19.2
Total		120	100.0

Figure 7 confirms what is presented in Table 14.

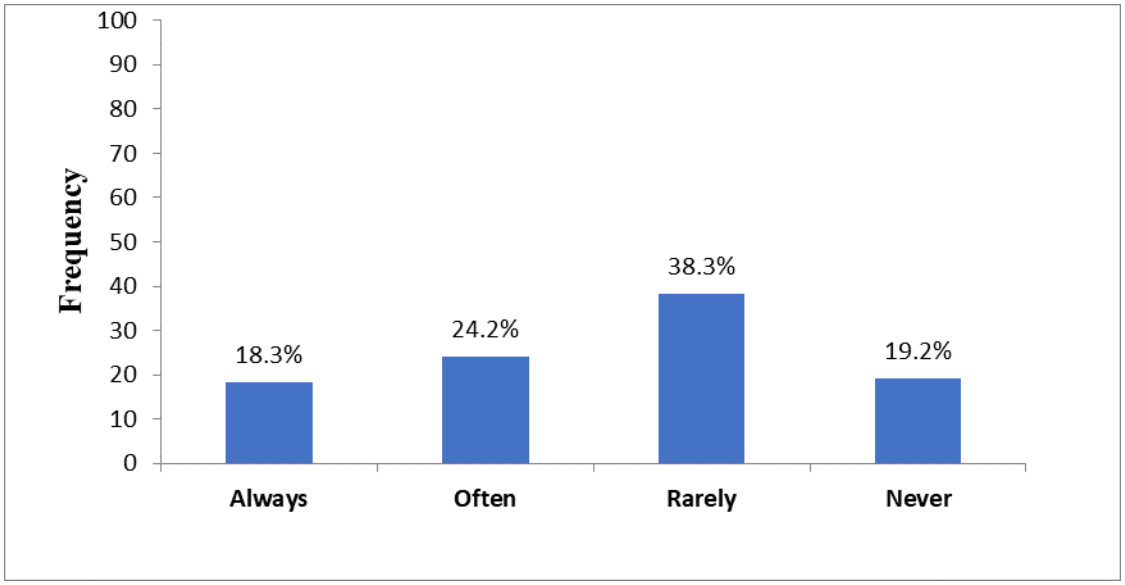

Figure 6: Extent of Teacher Practice of Formative Assessment

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The result in Figure 7 indicates that 38.3% of the teachers hardly practise formative assessment while 24.2% of the teachers often practise formative assessment. As much as 19.2% of teachers never practise formative assessment, while only 18.3% always practice formative assessment. The result further shows that the percentage of teachers that always practise and those that never practice formative assessment are nearly the same.

4.4.2 Research Question Two

Research Question 2 stated: *"How do teachers' value formative assessment practice in Nigerian primary schools?"*

The responses of the teachers were classified into three levels of 'Crucial', 'Not Important' and 'Bad Practice'. With score ranges of 91.0-120.0, 61.0-90.0 and 30.0-60.0 respectively. The ranges were obtained based on the results of the survey. The total highest possible score for a teacher based on the 30 items is 120The range is 90 (120-30) and$\frac{90}{3}$ = 30. The range is obtained because of the number of questions to be answered, which are 30 in total under the three classifications. Hence, any respondent whose score on all the items falls within 30.0-60 is said to practice formative assessment in a 'Crucial' way. The frequency and percentage of the use of formative assessment as valued by the teachers is presented in Table 15.

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Table 15: The Value of Formative Assessment Practice by Teachers

Value of formative assessment practice	Range of Scores	Frequency	Percentage (%)
Crucial	90.1-120.0	71	59.2
Not Important	60.1-90.0	32	26.7
Bad Practice	30.0-60.0	17	14.2
Total		120	100.0

As shown in Table 15, most of the teachers valued the use of formative assessment in Nigerian primary schools by placing a high premium on its practice. The value teachers place on the use of formative assessment practices is reflected in the percentage of teachers (59.2%) who viewed formative assessment practices as crucial. A low percentage of teachers regard formative assessment as 'Not important' (26.7%), while 14.2% see it as 'Bad practice'. The implication of this finding is that 59.2% of Nigerian primary school teachers in this sample of teachers studied value the use of formative assessment practices by placing a high premium on it. Of great concern is the 14.2% who regard formative assessment as bad practice despite the many benefits of formative assessment as highlighted in this study.

4.4.3 Research Question Three

Research question 3 stated: "*To what extent are there statistically significant differences between teachers' value and practice of formative assessment?*"

The question was answered with the Wilcoxon Signed-Rank Test. The use of the Wilcoxon signed-rank test is a non-parametric approach and is necessitated by the nature of the data collected, which was not normally distributed and did not agree with the

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assumption of the parametric paired t-test (Woolson, 2007). The Wilcoxon Signed-Rank Test was used in order to find out if there is statistically significant difference between what teachers value and practice, they assign to the use of formative assessment practice in primary schools. According to Woolson (2007, p.1), “the test statistic is the sum of the ranks for either the positives or the negatives values”.

4.4.3.1 Test of Reliability

Reliability is the degree to which an instrument reflects the construct that it is measuring consistently (Field, 2009). Cronbach’s alpha coefficient is used to measure the internal consistency reliability (Bonett & Wright, 2015). Cronbach's alpha test of reliability was used to show the internal consistency of the questionnaire in this study. Cronbach’s alpha value (α) is commonly used to examine the internal reliability or consistency of summated rating scale (Vaske, Beaman & Sponarski, 2017).

The “statistic typically ranges from 0.00 to 1.00, but a negative value can occur when the items are not positively correlated among themselves” (Vaske et al., 2017). The number of items in the scale usually depends on alpha size (Vaske et al., 2017). Table16 presents the Cronbach’s alpha test of reliability for the survey items.

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Table 16: Cronbach's Alpha Test of Reliability

Teaching Dimension	Questions Numbers	Cronbach's Alpha Value
D1	21,11& 28	0.74
D2	1, 2, 3, 7, 8, 18, 20, 23 & 25	0.62
D3	4,5,10,12 & 22	0.88
D4	19 & 29	0.90
D5	6, 9, 13, 14, 15, 16, 17, 24, 26, 27 &30	0.60
Overall	30	0.86

The Cronbach's alpha value of 0.86 for the questionnaire overall indicates that it is acceptable and reliable. As indicated in Table 16, the results show that the questions designed are consistently measuring the several teaching strategies dimensions of formative assessment, including teacher attitudes about formative assessment values and practice.

4.4.3.2. Test for Normality

According to Razali and Wah (2011), an assumption of normality must be evaluated by statistical process to avoid violating the inferences so that the interpretation will be valid and reliable. It is always advisable to look out for the assumption prior to conducting an important statistical process (Razali & Wah, 2011). This study conducted the test for normality by using the Shapiro-Wilk test to ascertain if the parametric assumption is violated. The test is based on testing the following two hypotheses.

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Null hypothesis H_0: the data are normally distributed.

Alternative hypothesisH_1: the data are not normally distributed.

Decision rule: Reject H_0 if p-value < α, or do not reject if otherwise. Table 17 presents the test for normality to indicate if the data collected was normally distributed or not.

Table17: Test for normality

Tests of Normality			
	Shapiro-Wilk		
	Statistic	Df	p-value
Data	0.994	30	0.004

If (Df) is the degrees of freedom note that Df is N-1where N is the number of observations. Table 17 indicates that since the p-value of (0.004) is less than the probability value (0.05), the study therefore rejects H_0 and concludes that the data collected is not normally distributed at the 5% level of probability.

4.4.3.3. Conversion of the Likert scale to a single-score scale

The use of a single-score test for the practice and the value axis was achieved with the values obtained for X and Y on the questionnaire. The values obtained were because of the five teaching strategy dimensions of formative assessments, which are presented in Table 8. Clarifying and sharing learning intentions and criteria for success was achieved by aggregating the responses of teachers on each item linked to D1.

For instance, from Table 18, for statement one of the X-axis (practice), 63 out of the 120 responses were in favour of the question that “Assessment provides me with useful evidence of my learners’ understandings which I use to plan subsequent lessons”. This question was converted to a percentage (63/120) x 100 = 52%. The same was done for all the questions both on the X and Y-axis. Therefore, the median value obtained from the respondent for the X-axis (practice) on the 30 questions was 67%, while the median value

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obtained from the respondents for the Y-axis (value) on the 30 questions was 78%. The test summary of differences between teachers' value and practice of the formative assessment is presented in Table 18 to Table 22.

Table18: Clarifying and sharing learning intentions and criteria for success

No	Question	Dimension	(X) Practice	(Y) Value	Difference
11	Students' learning objectives are discussed with learners in ways they understand.	D1	68%	82%	-14%
21	Students are helped to understand the learning purposes of each lesson or series of lessons.	D1	73%	84%	-11%
28	Assessment criteria are discussed with students in ways that they understand.	D1	51%	52%	-1%

Within this survey it was found that assessment dimension 1, (D1), which dealt with learning intention as presented in Table 18: Question 11, has a difference of -14%, while question 21 has -11%, and question 28 has a difference of -1%. The result indicates that the teachers value the use of formative assessment more than they put formative assessment into practice.

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Table 19: Engineering Effective Classroom Discussions

No	Question	Dimension	(X) Practice	(Y) Value	Difference
1	Assessment provides me with useful evidence of my students' understandings which I use to plan subsequent lessons.	D2	52%	80%	-28%
2	The next lesson I teach is determined more by the prescribed curriculum than by how well my students did in the last lesson.	D2	52%	83%	-31%
3	The main emphasis in my assessments is on whether my students know, understand or can-do prescribed elements of the curriculum.	D2	83%	93%	-10%
7	I use questions mainly to elicit factual knowledge from my students.	D2	51%	61%	-10%
8	I consider the most worthwhile assessment to be assessment which is undertaken by me.	D2	77%	80%	-3%
18	I use questions mainly to elicit reasons and explanations from my learners.	D2	81%	98%	-17%

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20	Students' errors are valued for the insights they reveal about how learners are thinking.	D2	59%	70%	-11%
23	Learners' learning objectives are determined mainly by the prescribed curriculum.	D2	69%	98%	-13%
25	The main emphasis in my assessment is on what students know, understand, and can do.	D2	100%	83%	17%

Dimension 2 (D2) dealt with effective classroom discussions as presented in Table19. Question 1 has a difference of -28%, question 2 has a difference of -31%, question 3 and question 7 each has a difference of -10%, question 8 has a difference of -3%, question 18 has-17% as the difference, question 20 has -11%, and question 23 has -13%. These questions with the negative indicate that teachers value formative assessment more than they apply formative assessment. Only question 25 has a positive difference of 17%, which shows that the teachers practice formative assessment they value.

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Table 20: Providing Feedback that Moves Students Forward

No	Question	Dimension	(X) Practice	(Y) Value	Difference
4	The feedback that my students receive helps them improve.	D3	92%	84%	8%
5	Students are told how well they have done in relation to others in the class	D3	76%	61%	15%
10	Students are told how well they have done in relation to their own previous performance.	D3	61%	73%	-12%
12	Assessment of students' work consists primarily of marks and grades.	D3	90%	72%	18%
22	Assessment of students' work is mainly in the form of comments.	D3	80%	99%	-19%

Dimension 3 (D3) looked at providing feedback that moves learners forward presented in table 20. Question 4 has 8% difference. The results, as indicated in Table 20, indicates that the teachers apply the assessment they practice. Question 5 has a difference of 15%, which also shows that teachers put formative assessment into practice. Question 22 has-19% and question 10 has -12%.This percentage indicates that teachers value formative assessment more than they implement the assessment practice, while question 12 has 18%, which clearly shows that teachers practise formative assessment as much as they value the formative assessment practice.

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Table21: Activating Students as Instructional Resources for One Another

No	Question	Dimension	(X) Practice	(Y) Value	Difference
19	I provide guidance to help students to assess one another's work.	D4	92%	62%	30%
29	Students are given opportunities to assess one another's work.	D4	56%	76%	-20%

Dimension 4 (D4) dealt with activating students as instructional resources for one another (group work) as presented in Table 21. Question 19 has a difference of 30%, which indicates teachers practice the assessment they value, while question 29 has -20% difference, which indicates teachers do not practice formative assessment as much as they claim to value the formative assessment.

Table 22: Activating Students as Owners of Their Own Learning

No	Question	Dimension	(X) Practice	(Y) Value	Difference
6	Students are given opportunities to decide their own learning objectives.	D5	66%	88%	-22%
9	My assessment practices help students to learn independently.	D5	54%	96%	-42%
13	I provide guidance to help my students assess their own work.	D5	60%	51%	9%

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14	I identify students' strengths and advise them on how to develop them further.	D5	82%	54%	28%
15	Students are helped to find ways of addressing problems they have in their learning.	D5	77%	88%	-11%
16	Students are encouraged to view mistakes as valuable learning opportunities.	D5	84%	74%	10%
17	Students are helped to think about how they learn best.	D5	58%	72%	-14%
24	I provide guidance to help students assess their own learning.	D5	62%	94%	-32%
26	Students are helped to plan the next steps in their learning.	D5	57%	66%	-9%
27	Students' effort is seen as important when assessing their learning.	D5	67%	95%	-28%
30	I regularly discuss with students' ways of improving learning how to learn.	D5	54%	70%	-16%

Lastly, the fifth dimension dealt with autonomous learning, as presented in Table 22. Question 6 has a difference of -22%, question 9 has -42%,15 has -11%, question 17 has -14%, question 24 has -32% and question 26 has -9% difference, while question 27 has a difference of -28% and question 30 has -16% difference. These questions with the

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negative values indicate the formative assessment strategies that the teachers value more than they practice. Question 13 has a difference of 9%, question 14 has 28%, and question 16 has a difference of 10%. These questions show that the teachers put into practice as much as they value formative assessment. The next section presents the results of the Wilcoxon Signed-Rank Test to determine statistically significant differences between teachers' value and practice of formative assessment overall.

4.4.3.4 Wilcoxon Signed-Rank Test

The "Wilcoxon signed-rank test is a non-parametric statistical hypothesis test that is used to compare two related samples, matched samples or repeated measurements on a single sample to assess whether their population ranks differ" (Maree, 2016, p.256). It can be used as an alternative to the paired Students' t-test (Maree, 2016). In this study, a Wilcoxon signed-rank test was used to examine the differences between teachers' value and practice of formative assessment.

Table 23: Wilcoxon Signed-Rank Test

Null Hypothesis	Test	Sig.	Decision
Median difference between X and Y equals 0	Wilcoxon Signed-Rank Test	0.017	Reject the null hypothesis
Total		30	
Test statistics		9.511	
P- Value		0.017	

Table 23 shows the p-value of (0.017), which is the probability value or calculated probability of finding the observed or more extreme results, when the null hypothesis (H0) of a study question is true. The null hypothesis for this study states that the median

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difference between the teachers' value and practice of formative assessment being the same is rejected, given that the significant value obtained 0.017 is less than the probability value 0.05. This study, therefore, rejects the null hypothesis and concludes that there is a statistically significant difference between the teachers' value and practice of formative assessment in Nigerian primary schools. The implication of this result on the quality of education is that practising of formative assessment in the classroom poses some challenges to teachers even though they value the practice. It can be assumed that the teachers know the relevance of formative assessment in the teaching and learning processes and how it could improve students' learning, how it can provide feedback for the learning progress and provide a remedy for learning difficulties. However, the discrepancy between how teachers reportedly practise formative assessment and how they value the assessment means that formative assessment practice is not yet optimally implemented.

4.5 Summary of Results

In summary, the study revealed that despite overall positively valuing formative assessment strategies, most of the teachers did not practise formative assessment as they did not adopt the strategy of clarifying and sharing learning intentions as well as the criteria for success with their students.

Also, 34.2% of the respondents rarely practised formative assessment by engineering effective classroom discussion. The result implies that some of the teachers rarely adopt and practise the strategy of engineering effective classroom discussion with their students. Similarly, 47.5% of the teachers adopted the formative assessment strategy of providing feedback that moves the students forward. The outcome of the study showed that 45% of the teachers did not adopt the strategy of activating students as instructional resources for one another. The study also indicates that 34.2% of the teachers adopted a teacher-centred teaching method as opposed to a student-centred approach, where in the latter students can be activated as instructional resources for one another.

Additionally, it was revealed that 38.8% of teachers rarely practise formative assessment in the studied primary schools in Nigeria. Yet, the response range shows that teachers placed significant value on formative assessment practices, as reflected in the fact that

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59.2% of teachers viewed formative assessment practices as crucial. This discrepancy between values and practice demonstrated by the research results, which show that there is a statistically significant difference ($p<0.05$) between the teachers' practice and their value of formative assessment in the studied primary schools.

The study notes a high reliance on formative assessment principles by teachers in their daily teaching engagement. As gleaned from the results, the disparity between appreciation of the principles and their implementation remains an area that possibly require further investigation to improve on the level of understanding of the principles as well as their practice and appreciation. Chapter Five draws conclusions and provides recommendations on the study.

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Chapter Five:

Conclusion and Recommendations

"Formative assessment is something that we as teachers should embrace and use as a positive force for learning"

-Benson (2004)

5.1. Introduction

Chapter Five draws together the research questions, the process of the research, the results, and recommendations. The summary of the research procedures as they took place is presented in Section 5.2. The main research questions and sub-questions for the research, including the conceptual framework that underpins the research are presented in Section 5.3. The findings from the research are presented in Section 5.4, while the recommendations, including the areas for further research are presented in Section 5.5. Section 5.6 discusses the limitations of the study while Section 5.7 presents the conclusions from the study.

5.2 Research Summary

This research was carried out to investigate teachers' values and practice of formative assessment in selected Nigerian primary schools. A total of 120 respondents were sampled in Lagos and Kwara States in Nigeria. A total of 120 teachers were selected as respondents from 11 primary schools in the two states. The study discussed the extent to which teachers in Nigerian primary schools practice formative assessment and the value they place on the implementation of formative assessment in primary schools. Results show that there were significant differences between appreciation or value and implementation or practice of formative assessment strategies. The findings clearly indicate that the use of formative assessment practice is very important.

The focus of the study was to ascertain teachers' attitude towards formative assessment practice in the classroom. It was further shown from the literature review that summative assessment practices are preferred because they are less stressful and teachers do not have much time to assess students continuously (Idowu& Isere, 2009). These

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unfavourable teachers' attitudes towards formative assessment practice serve as the driver for the present study, which sought to investigate how formative assessment is being practised and valued by the teachers teaching in Nigerian primary schools. Formative assessment is a continuous process of evaluating students during the teaching and learning process (Earl, 2006). By implementation, formative assessment practice can enhance learning and quality teaching. It is further deduced from the review that the use of formative assessment practice can positively inform the instruction process. Based on these positive attitudes, the current study advocates that primary schools in Nigeria should incorporate formative assessment practice in their teaching and learning programmes more effectively.

Some of the challenges facing the implementation of formative assessment practice in the classroom by primary school teachers were identified to include insufficient and inadequate facilities, untrained and incompetent teachers, poor quality of infrastructure and classroom content, insufficient teaching time due to high teacher/student ratios; and lack of awareness of formative assessment practice (Adegbesan, 2011; Adikwu, 2014).

Chapter Two reviewed literature. The chapter examined the work of Antoniou and James (2014) and Nwokeocha (2014) along with others who examined the concept of assessment. Additionally, the chapter analysed the history of assessment (Sadler, 1989). The review brought to the fore that the approach most teachers use in respect of assessment practice has moved from just grading the students at the end of the instruction to providing opportunities to improve the learning and teaching process (Brian, 2010). It is further noted that two types of assessment have taken the lead in linking assessment and learning, namely the summative technique and the formative technique (Benson, 2004).

The major aim of formative assessment, unlike summative assessment, is to support learning and teaching, which is shown to be an essential factor in students' progress and in preparing students for a future academic career with a passion for life-long learning (Young & Jakson, 2014). Furthermore, it was revealed that the use of formative

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assessment has the potential to improve the interaction between students and the teachers, identify learning abilities and improve the teaching methods (Looney, 2011).

The Nigerian policy on assessment practice in primary schools showed that continuous assessment is meant to measure the abilities of students; to enhance the national competitiveness of the product of Nigeria education system; to improve the credibility of examinations conducted in Nigeria; and to eliminate the untraceable problem associated with the traditional pencil paper test (Odo, 2014). The review also showed that primary school teachers mostly depend on the test items that they get from textbooks and past examination questions for their assessments (Ajogbeje, 2013).

It is concluded that teachers, students, and peers should be encouraged to practice formative assessment in the classroom more frequently given that formative assessment activities like quizzes, performance tasks, assignments, informal checks and dialogue are of utmost benefit to teachers and students in the learning process (Benson, 2004). A major theme that resonates in the study is the concept and purpose of formative assessment. Relying on the work of Boston (2002) among others, the concept and purpose of formative assessment and teachers' engagement show that the level of value placed on the practice is high. Similarly, findings also show that students' improvement can be used to progress the instruction process (Shephard, 2008).

Many benefits are attributed to the application of formative assessment during the instruction process (Brian, 2010). Among the benefits are its assistance in monitoring the progress of individual students and their learning experience through frequent feedback (Dixson &Worrell, 2016). Further, student academic performance also improves with regular feedbacks, which is the main function of formative assessment practice (Boston, 2002). The review further revealed that although the implementation of formative assessment is desirable and appealing, teachers scarcely apply it during the instruction process (Antonion & James, 2014; Earl, 2013; Brian, 2010). Some of the challenges reported as facing teachers in implementing formative assessment include lack of

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commitment from the staff; some teachers lack sound knowledge of assessment; autonomous learning is not promoted; and teacher control is reduced (Salau, 2016).

Chapter Three presented and discussed the design of the research, including the research objectives, sampling methods, and the data collection instruments. With the primary objective of investigating teachers' value versus their practice of formative assessment in the primary school education system, a survey was conducted in 11 primary schools in Lagos and Kwara States of Nigeria. In the survey, 120 teachers from the schools reported on their value and practice of formative assessment using a structured questionnaire. A quantitative research method involving a combined use of descriptive and inferential statistics was used to analyse and present the data.

A convenience sampling method was used to select the teachers that participated in the study. A convenience sampling method was used after due considerations of teachers' availability, accessibility of the schools, and geographical proximity. A convenience sampling technique thus meets certain specific criteria, such as the willingness to participate and availability (Etikan, Musa, & Alkassim, 2016). An existing and validated questionnaire designed by James and Pedder (2006) was used to get information regarding teacher value and practice of formative assessment practice. The questionnaire uses Likert scale type of responses (Warwick et al., 2015) to investigate whether there was any difference between teachers' value of and the way they practice formative assessment practice.

This chapter further elaborated on the ethical considerations of the study. Permission to conduct the study was sought and obtained from the Ethics Committee in the Faculty of Education at the University of Pretoria. The researcher took the letters and the consent forms to the various primary schools' headmasters/headmistresses to seek permission for their teachers to participate in the research. The researcher obtained permission to carry out the study from the respective headmasters or headmistresses of the various schools that participated in the research study after explaining in detail the purpose of the study. The primary school teachers voluntarily agreed to participate in the research after the researcher had explained the reason for the study. The letter of consent to take part

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in the research was first signed by the teachers before they were given the questionnaire to complete. The details of the researcher and those of the supervisor were fully provided in the participants' consent form in case there is need to contact them.

A promise of confidentiality was made to the participants. The participants were also told that they are free to withdraw from participating in the survey at any stage of the study. The privacy and confidentiality of the participants were also guaranteed. The researcher also made the participants understand that the research would be used for the intended purposes and would not compromise their identity or confidentiality. Pseudonyms were used to conceal the participants' real names and only the researcher and the supervisor would have access to the raw data.

The participants were further informed that the outcome of the research would be shared through a focus group discussion, a workshop, and a seminar to deepen their knowledge concerning the implementation of formative assessment practice. The research was carried out and data collected only in the various schools that gave their consent to participate in the study. Thus, the teachers' knowledge regarding assessment was willingly volunteered by them and not plagiarised.

Chapter Four presented the findings and discussions from the questionnaire data. The analysis was done with the use of SPSS. Both descriptive and inferential statistical methods were used to analyse and present the data. The descriptive statistics used were in form of tables, charts, means, mode, medians, and percentages. Generally, tables, medians, and percentages were used to analyse and present the five formative assessment teaching strategy dimensions of the questionnaire while charts were used to present teachers' responses to the value and practice of formative assessment in Nigerian primary schools. The inferential statistics used the Wilcoxon Signed-Rank Test to test the hypothesis on whether or not a statistically significant difference between teachers' value and practice of formative assessment was detectable.

5.3 Reflection on the Conceptual Framework

The aim of the study was mainly to find evidence of teachers' value and practice of formative assessment implementation in the classroom. The study relied on the

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framework by Warwick et al. (2015), as this framework helps to provide reliable evidence regarding how teachers practise and value formative assessment practice in primary schools. Formative assessment is conceptually believed to deliver quality education and the intended learning outcomes, as discussed in Chapter two. This framework was considered most appropriate for the research because it corresponds with the questionnaire questions used in this study. The questionnaire questions mainly dealt with both the teachers' and students' interaction during the teaching and learning process as viewed from the teachers' perspective. The framework also recognised autonomous and peer-to-peer learning and motivated teachers and students' progress during the instruction process.

From the five formative assessment teaching strategy dimensions as illustrated in Table 8 to Table 12 in Chapter Four, the following have been deduced.

5.3.1 Strategy One: Clarifying and Sharing Learning Intentions

Results show that teachers rarely adopt the formative assessment strategy of clarifying and sharing learning intentions as well as criteria for success with their student. The problem, as supported by literature, is exacerbated by large classes and inadequate time available to teachers to perform this function. Therefore, it can be concluded that teachers are not yet implementing this formative assessment teaching strategy appropriately during the teaching and learning process.

5.3.2 Strategy Two: Engineer Effective Classroom Discussion

This dimension, according to Onuora-Oguno (2018) is not achieved due to poor policy implementation and poor understanding of the curriculum all of which have resulted in poor quality education in Nigeria. The poor quality of education is attributed to the fact that teachers often fail to carry out their roles as specified in the curriculum, which include raising issues or questions that will encourage students' participation in the teaching and learning processes. It is therefore evident from the findings from the current study that the teachers were not effectively implementing this formative assessment strategy during the instruction period.

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5.3.3 Strategy Three: Provide Feedback That Moves Students Forward

Responses showed that most of the teachers ‘always’ and ‘often’ provide feedback that move the students forward. According to Looney (2011), feedback helps to descriptively identify gaps in understanding and to inform the students specifically on how to improve on their learning, instead of just focusing on the areas they are not doing well. The findings from this study contrast with the assertion of Salau (2016), who opines that assessment in Nigerian schools predominantly focuses on knowledge, concepts, and skills, as measured by summative examinations. From this study it was concluded that providing feedback that moves students forward was indeed the most frequently formative assessment strategy that was practiced.

5.3.4 Strategy Four: Activating Students as Instructional Resources for One Another

Despite using feedback frequently as reported in the previous strategy, it was evident from the responses that a great number of teachers rarely adopt the formative assessment strategy of activating students as instructional resources for one another. The outcome is attributed to the failure by teachers to motivate discussions in the classroom, thereby failing to activate the zeal of students to learn from one another. According to Heritage (2008) formative assessment touches students on an on-going basis, in real time, and has the power to affect their achievement because it has the potential to develop and deepen their thinking. Therefore, it was evident enough that teachers were not effectively practising this strategy during the teaching and learning process.

5.3.5 Strategy Five: Activating Students as Owners of Their Own Learning

Findings show that formative assessment in the form of students acting as owners of their own learning was not implemented by most of the teachers. Susan (2003) avers that formative assessment encourages all students to take responsibility for and become active in their own learning for better performance and improvement in academics. Gareis and Grant (2015) also opine that formative assessment is used to develop the students’ capacity for self-directed learning and self-paced evaluations well as provide timely and

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constructive feedback to students. Most teachers still adopt teacher-centred teaching methods as opposed to learner-centred method, where students can be activated as instructional resources for one another. Teachers also tend to dominate and control their classes rather than allow students' progress to dictate the direction their lessons will go. Consequently, results from this study confirms a lack of implementation of this form of formative assessment appropriately in the classroom.

These formative assessment strategies, according to Warwick et al., (2015), were designed to foster the students' meta-cognitive learning during the instruction process. However, findings show that the majority of the teachers in the schools did not efficiently implement formative assessment practices in forms of adopting the strategy of clarifying and sharing learning intentions with their students; engineering effective classroom discussion; activating students as instructional resources for one another; and activating students as owners of their own learning. However, the teachers most frequently reported the implementation of the strategy that provides feedback to students to move their learning forward.

5.4 Research Findings

Research findings on teachers' differences in value and practice of formative assessment practice in the classroom are presented in the following section. The responses or findings in respect of the research questions are presented below.

5.4.1 Sub-Question One: What is the extent to which teachers practise formative assessment in Nigerian primary schools?

It was found that 26.7% and 14.2% of the respondents regarded formative assessment practice as 'Not important' and 'Bad practice' respectively.

Although these percentages seem low, the failure to implement formative assessment practice in the schools could be attributed to what Adegbesan (2011) attributed to inadequate resources, large class size, lack of motivation, and heavy workload among others. In addition to these factors, several teachers seem to neglect daily formative assessment practices, focusing mostly on summative assessments, such as weekly

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quizzes, chapter tests, annual state-mandated tests, the national exams such as the West African Examination Council (WAEC), examinations, and other standardised tests. Such assessments do little to improve students' learning because they do not enhance teachers' practice (Elui & Studies, 2008).

It is further noted that most of the teachers in the Nigerian primary school system do not have adequate qualification or knowledge to implement and authenticate the use of teacher-made tests in school-based assessments (Osunde, 2008). Indeed it was found that the focus at the primary school level of the Nigeria National Policy on Education is on teachers to teach and gauge the behaviour of the students in the psychomotor, cognitive, affective and psychomotor domains in order to make decision about every student for future purposes. The psychomotor domain is to be measured within the framework of perception, response, and adaptation (Osadebe, 2014).

These findings lead to the conclusion that Nigerian teachers do not make meaningful or genuine efforts to ensure good understanding during the course of their teaching, while the students on the other hand tend to memorise questions (Elui and Studies 2008).

5.4.2 Sub-Question Two: How do teachers' value formative assessment practice in Nigerian primary schools?

Findings showed that 59.2% of the teachers regard formative assessment as crucial in Nigerian primary schools. This outcome differs from the findings of Idowu & Esere (2009), who reported that many teachers in the country value summative assessment more frequently. However, this study revealed that although teachers reportedly valued formative assessment, they did not actually practise formative assessment in the classrooms.

5.4.3 Sub-Question Three: To what extent are there statistically significant differences between what teachers practise and value with respect to formative assessment?

Chapter Four provided a detailed overview of how the internal reliability was established, and the test for normality was conducted before making the decision that non-parametric

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methods would be most appropriate, given the current study's data distribution. Cronbach's alpha coefficient for internal reliability or consistency of the study instrument (Vaske, Beaman & Sponarski, 2017) was conducted and showed the instrument was reliable and consistent. Consequently, a non-parametric inferential statistical method was used, more specifically, the Wilcoxon Signed-Rank Test, to test whether there was statistically significant differences between teachers' value and practice of formative assessment implementation in primary schools. This test showed that there was a significant difference ($p<0.05$) between teachers' value and practice of formative assessment in Nigerian primary schools.

Based on the results it could be inferred that if value and practice are better aligned, better performance could be achieved, as reported by Ugodulunwa and Okolo (2015) and Olutola et al., (2016).

5.5 Recommendations

Given that most of the teachers that participated in this study reported failure to implement formative assessment practice efficiently; even though they value the practice, the following recommendations are put forward.

5.5.1 Provide Regular Teacher Training Programmes

It is recommended that regular seminars, in-service training, workshops, and symposia should be organised for primary school teachers on the implementation of formative assessment. Regular organisation of such seminars should be sustained because it will help to keep teachers abreast of the latest developments on formative assessment practices and other performance improving innovations and developments. It will also help teachers to share ideas on the challenges confronted in implementing formative assessment in the classroom.

Teachers' training programmes should also place more emphasis on the use of formative assessment so that aspiring teachers should have early knowledge regarding formative assessment practice that will help them build on their skills. When new teachers come

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into the classroom, they will already be familiar with the formative assessment concept and would be better prepared for its implementation.

5.5.2 Providing Adequate Financial and Material Resources

It is recommended that adequate human, physical, financial, and material resources be provided for better and more productive classroom discussions, especially in under-resourced school classrooms. Schools should try to adhere to the ratio of teachers to students that is supposed to be 1:35 according to the Nigerian National Policy on Education. The Universal Basic Education Programme should be redirected towards getting more teachers into primary schools to ensure smooth implementation of formative assessment to build more solid foundations at the primary school level in schools.

5.5.3 Curriculum and Syllabus

The current curriculum and syllabus should place more emphasis on the use of formative assessment as a strategy to redirect focus from summative to formative assessment. The benefit derivable from the use of formative assessment would help to prepare students to achieve mastery learning instead of just aiming at passing exams.

5.5.4 Future Research

Further research should be carried out to elicit strategies to improve the teaching process and enhance learning in primary school teachers, particularly those teaching in the upper primary session from primary four to primary six.

There is a need to carry out further research that would encompass a wider scope of geo-political zones and more teachers in Nigeria on the use of formative assessment in schools.

A mixed-method approach could be done using the classroom observation approach, which should give more room for clarifications during unstructured interviews and focus group discussions in addition to quantitative, survey data.

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5.6 The Limitations of the Study

- This study was limited to only two states in Nigeria, Lagos and Kwara, out of the 36 states in Nigeria. The study used an existing questionnaire and could not make any changes to suit the current research context.
- The study used only the quantitative method. A mixed-method approach would have been appropriate if more time was available to give more meaning and add depth to the study.
- Some of the schools that were previously earmarked to participate in the study could not be accessed and were therefore dropped from the study.
- Teachers that initially agreed to participate in the study later refused to take part.
- Only 120 teachers participated in the research. The study would have tested a larger sample if more time and resources were available to the researcher.

5.7 Conclusion

The study affirms that formative assessment, if properly implemented has a strong potential to enhance the learning and teaching process in primary schools in Nigeria. Both theoretical and empirical evidence from the study show that the teaching and learning process must be conducted in such a way that formative assessment and summative assessment would be both applied in assessing students all through the instruction period and not just for promoting students from one grade to another. The study further showed that there is significant difference ($p<0.05$) between teachers' practice and the value they place on formative assessment practice in the studied primary schools in Nigeria. Finally, it is recommended that to bridge the gaps between teachers' practice and the value they place on formative assessment, there is the need to systemically build the capacity of teachers through enhancing institutional facilities, developing teachers' capabilities, and providing adequate financial and material resources for efficient and effective classroom teaching.

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APPENDIXES:

APPENDIX A. Survey Questionnaire

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

Questionnaire

For completion by Teachers

Assessment for Learning in International Contexts: Nigeria

Please read the instructions on the next page carefully

Instructions for completing the questionnaire

Purpose of the questionnaire

Thank you very much for agreeing to complete this questionnaire. We realise that you are very busy and so we are particularly grateful for your commitment and effort. **We would like you to complete the questionnaire to gain more information** about **your practices and values in relation to classroom assessment, teachers' learning and school management.**

The questionnaire

Teachers tend to take between **30 and 45 minutes** to complete this questionnaire. The questionnaire consists of two sections: **sections A and B.**

Please note: All responses **will be treated as strictly confidential**

- **Section A** contains **30 statements** about **assessment practices**
- **Section B** asks for some **background information** about you**.** Personal information shall be kept **anonymous.**

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Completing Section, A: Classroom Assessment

1. **Section A** consists of **30 statements.** Each statement relates to an aspect of **assessment**

   Example
2. There are **two scales** for each of the 30 statements: **scale X and scale Y.** For each statement we would ask you to tick **one box only** under **scale X** and **one box only** under **scale Y.**
3. You will notice in the example that **each statement appears in the centre,** between **scale X** and **scale Y.**
4. **Scale X** on the left-hand side is **about you.** We would like you to read each statement and think about **your own practices** in relation to **assessment.** Please tell us how often or rarely you do each of the listed practices.
5. **Scale Y** on the right-hand side asks you to tell us about **your educational values** in relation to each of the listed practices. **Irrespective of how much or how little of a practice you do**, scale Y asks you to tell us **how important you think the practice is for enhancing the quality of pupils' learning.**
6. Please tick only **one** box for each statement in scale X and **one** box for each statement in scale Y

Please complete section A

Scale X **Your assessment practices** **(About You)**				**Section A** **Assessment practices**	**Scale Y** **How important are assessment practices for creating opportunities for learners to learn?** **(About your values)**			
Never true	Rarely true	Often true	Mostly true		Not at all important	Of limited importance	Important	Crucial
				1. Assessment provides me with useful evidence of my students' understandings which I use to plan subsequent lessons.				
				2. The next lesson I teach is determined more by the prescribed curriculum than by how				

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				well my learners did in the last lesson.				
				3. The main emphasis in my assessments is on whether my students know, understand or can-do prescribed elements of the curriculum.				
				4. The feedback that my students receive helps them improve.				
				5. Students are told how well they have done in relation to others in the class.				
				6. Students are given opportunities to decide their own learning objectives.				
				7. I use questions mainly to elicit factual knowledge from my students.				
				8. I consider the most worthwhile assessment to be assessment which is undertaken by me.				
				9. My assessment practices help students to learn independently.				
				10. Students are told how well they have done in relation to their own previous performance.				
				11. Students' learning objectives are discussed with learners in ways they understand.				
				12. Assessment of students' work consists primarily of marks and grades.				
				13. I provide guidance to help my students assess their own work.				
				14. I identify students' strengths and advise them on how to develop them further.				

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				15. Students are helped to find ways of addressing problems they have in their learning.				
				16. Students are encouraged to view mistakes as valuable learning opportunities.				
				17. Students are helped to think about how they learn best.				
				18. I use questions mainly to elicit reasons and explanations from my students.				
				19. I provide guidance to help students to assess one another's work.				
				20. Students' errors are valued for the insights they reveal about how students are thinking.				
				21. Students are helped to understand the learning purposes of each lesson or series of lessons.				
				22. Assessment of students' work is mainly in the form of comments.				
				23. Students' learning objectives are determined mainly by the prescribed curriculum.				
				24. I provide guidance to help students assess their own learning.				
				25. The main emphasis in my assessment is on what students know, understand, and can do.				
				26. Students are helped to plan the next steps in their learning.				
				27. Student effort is seen as important when assessing their learning.				
				28. Assessment criteria are discussed with students in ways that they understand.				
				29. Students are given opportunities to assess one another's work.				

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				30. I regularly discuss with student's ways of improving learning how to learn.				

Please turn over now and complete section B.

Section B: Background information - *Please tick or fill in the appropriate boxes*

*(Please read all categories before ticking **one box**)*

1. Female ☐ **Male** ☐

2. Name of your school

3. Years of teaching experience

Less than 2 years ☐

4. Years at this school

Less than 2 ☐

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2 – 4 years	☐	2 – 4	☐
5 – 10 years	☐	5 – 10	☐
11 – 20 years	☐	11 – 20 years	☐
21+ years	☐	21+ years	☐

5. Post and responsibility

- Subject teacher ☐
- Head of department ☐
- Head teacher ☐
- Subject teacher with managements responsibly ☐
- Other –please specify ☐

6. Please identify your *main* area of responsibility *(tick **one relevant box**)*

- Learning support ☐

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- English as an Additional Language ☐
- Assessment ☐
- Subject teaching * ☐
- Other – please specify ☐

7. ***If you are engaged in ***subject teaching*** and/or you have responsibility for a ***Department*** please write your ***subject/s*** in the box below:*

Thank you very much indeed

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APPENDIX B: Letter to School Head Teacher

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

SM 18/08/04

December 9, 2018

Dear Head Mistress / Master,

My name is Onuora-Oguno Blessing Oghenebrume. I am currently a registered master's student at the above-named university. My research topic is: ''Value and Practice Differences in Assessment for learning in the international in Nigeria primary schools". The purpose is aimed at investigating how the use of formative assessment tools can enhance teaching and learning within the classroom settings. Teachers personal details as participants are not required, although they will be required to fill a questionnaire at least thirty minutes at their convenience. The following will be the importance of the research:

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- Understand why teachers should engage in formative assessment in classrooms.
- Understand how proper implementation of formative assessment a feasible and valuable roadmap may be to achieving success for students in the classrooms.
- Teachers are free to withdraw from the research at any time based on personal reason(s) best known to you.
- Teachers confidentiality will be guaranteed as neither their name, nor the name and address of your schools will be mentioned in neither the analysis nor the discussion of the results of data gathered.

Please I request that you sign the consent form attached hereto, this will be stored safely with all the documents relating to the study.

Yours sincerely,

Onuora-Oguno Blessing Oghenebrume

Researcher signature…… Date……...

(blaire.onuora@gmail.com, +2348033454204)

Supervisor signature…….. Date……...

Dr.SuretteVanStaden (surette.vanstaden@up.ac.za, +27124205159)

……..

Reply Slip

Teachers in my school will participate / not participate in your studies

…… ……

Name Signature Date

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APPENDIX C: Letter to the Participants

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Faculty of Education

SM 18/08/04

December 9, 2018

Dear Teacher

My name is Onuora-Oguno Blessing Oghenebrume. I am currently a registered master's student of the above-named university. My research topic is: ''Value and Practice Differences in Assessment for learning in international in Nigeria primary schools". The purpose is aimed at investigating how the use of formative assessment tools can enhance teaching and learning within the classroom settings. Your personal details as participants are not required, although you will be required to fill a questionnaire at least thirty minutes at your convenience. The following will be the importance of the research:

- Understand why teachers should engage in formative assessment in classrooms.
- Understand how proper implementation of formative assessment a feasible and valuable roadmap may be to achieving success for students in the classrooms.
- You are free to withdraw from the research at any time based on personal reason(s) best known to you.

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- Your confidentiality will be guaranteed as neither your name, nor the name and address of your schools will be mentioned in neither the analysis nor the discussion of the results of data gathered.

Please I request that you sign the consent form attached hereto, this will be stored safely with all the documents relating to the study.

Yours sincerely,

Onuora-Oguno Blessing Oghenebrume

Researcher signature…… Date……..

(blaire.onuora@gmail.com, +2348033454204)

Supervisor signature…….. Date……..

Dr.SuretteVanStaden (surette.vanstaden@up.ac.za, +27124205159)

……..

Reply Slip

I am willing to participate / not participate in your studies

…….. …… …… ……

Teacher name Signature Date

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APPENDIX D: Letter Requesting Permission from GDE

DECLARATION BY THE RESEARCHER	
1. I declare that all statements made by myself in this application are true and accurate.	
2. I accept the conditions associated with the granting of approval to conduct research and undertake to abide by them.	
Signature	
Date	AUGUST -06 -2018
DECLARATION BY SUPERVISOR/PROMOTER/LECTURER	
I declare that (Name of Researcher) B.O Onuora-Oguno	
1. Is enrolled at the institution/employed by the organisation to which the undersigned is attached.	
2. The questionnaires/structured interviews/tests meet the criteria of: • Educational Accountability. • Proper Research Design. • Sensitivity towards Participants. • Correct Content and Terminology. • Acceptable Grammar. • Absence of Non-essential/superfluous items. • Ethical clearance	
3. I will ensure that after success completion of the degree/project an electronic copy of the Research Report/ Thesis/Dissertation and a Research Summary (on the GDE template) will be sent by the researcher to the GDE.	
Surname:	Onuora-Oguno

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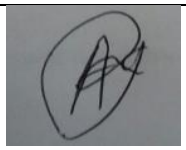
First Name/s:	Blessing Oghenebrume
Faculty/ Department (Where relevant)	Assessment and Quality Assurance in Education and Training
Telephone	+2348032107150
Email:	Blaire.onuora@gmail.com
Signature	
Date	AUGUST -06 -2018

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APPENDIX E: Letter Granting Permission from GDE

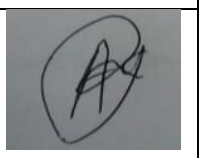
ANNEXURE A: Additional Information for Group Research

This information must be completed by every researcher/student who will be visiting GDE Institutions for research purposes.

By signing this declaration, the researcher/student accepts the conditions associated with the granting of approval to conduct research in GDE Institutions and undertakes to abide by them.

Supervisor/ Promoter/ Lecturer's Surname and Name Dr Surette van Staden

DECLARATION BY RESEARCHERS/STUDENTS

Surname & Initials	Name	Telephone	Cell	Email address	Signature
Onuora-Oguno. B.O.	**Blessing**	**+2348032107150**		**blaire.onuora@gmail.com**	

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N.B This form (and all other relevant documentations were available) may be completed and forwarded electronically to Gumani.mukatuni”Gauteng.gov.za and please copy (cc) Researchinfo”Gauteng.gov.za. The last 2 pages of this document must however have the original signatures of both the researcher and his/her supervisor or promoter. It should be scanned and emailed, posted or hand delivered (in a sealed envelope) to Gumani Mukatuni, 7th floor, 6 Hollard Building, Man and Simmonds Streets, Johannesburg. All enquiries pertaining to the status of research requests can be directed to Gumani Mukatuni on tel. no. 011 355 0775

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