THE RELATIONSHIP BETWEEN TEACHERS' CONTINUOUS ASSESSMENT PRACTICES AND LEARNERS' PERFORMANCE IN PRIMARY SCHOOLS IN KARONGA DISTRICT IN MALAWI

MEd (PRIMARY) THESIS

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CHANCELLOR COLLEGE

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DECLARATION

I the undersigned hereby declare that this thesis is my own original work which has not been submitted to any other institution for similar purposes. Where other people's work has been used acknowledgements have been made.

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CERTIFICATE OF APPROVAL

The undersigned certify that this thesis represents the student's own work and effort and has been submitted with our approval.

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DEDICATION

I dedicate this work to God Almighty for granting me good health throughout the entire period of study, my mum and dad, my family and all those who endeavour to improve the standards of education.

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ABSTRACT

Literature reports that making regular assessments of each learner's performance, while at the same time teaching, is the major problem of continuous assessment among teachers in primary schools. However, a well coordinated holistic continuous assessment could improve the performance of all learners and ultimately education standards. Specifically, this study sought to investigate the continuous assessment practices and the value they add to teaching and learning. To achieve this goal, the study investigated the number and type of continuous assessments given by teachers to their learners. The study also investigated the relationship between performance on continuous assessment and performance on summative assessment. The study employed the descriptive survey research design. Quantitative data generation methods and multistage sampling were utilised. The findings from the study suggest that teachers find it difficult to meet the minimum recommended number of continuous assessment. In addition, Teachers continuously give learners paper and pencil tests assessing the lower levels of the cognitive domain. Teachers also contradict themselves on what they say they do and what they actually do. However, there is a strong positive relationship between performance on continuous assessment and performance on summative assessment.

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LIST OF ABBREVIATIONS

CA	:	Continuous Assessment
CPD	:	Continuous Professional Development
DEM	:	District Education Manager
IPTE	:	Initial Primary Teacher Education
IPTE-ODL	:	Initial Primary Teacher Education through Open and Distance Education
JCE	:	Junior Certificate of Education
MANEB	:	Malawi National Examinations Board
MASTEP	:	Malawi Special Teacher Education Programme
MIITEP	:	Malawi Integrated In-Service Teacher Education Programme
MSCE	:	Malawi School Certificate of Education
NPC	:	National Primary Curriculum
PCAR	:	Primary Curriculum and Assessment Reform
PSLC	:	Primary School Leaving Certificate
PSLCE	:	Primary School Leaving Certificate Examinations
PTR	:	Pupil – Teacher Ratio
SA	:	Summative Assessment
SACMEQ	:	Southern and Eastern African Consortium for Monitoring Education Quality
SPSS	:	Statistical Package for Social Sciences
TALULAR	:	Teaching and Learning Using Locally Available Resources
USAID	:	United States Agency for International Development

CHAPTER ONE

INTRODUCTION TO THE PROBLEM

1.0 Chapter overview

This chapter gives a brief background of continuous assessment in Malawi with a focus on assessment policy, curriculum and assessment reform, continuous assessment methods and techniques, roles and challenges. In addition, a statement of the problem, purpose of the study, research questions and significance of the study are presented.

1.1 Background to the study

Effective practice in continuous assessment (CA) in the teaching and learning process are vital components of developing learners' learning skills and valuable in giving feedback and crafting instructional strategies (Heritage, 2007). According to Nitko & Brookhart (2007, p. 4), "CA is the daily process by which a teacher gathers information about learners' progress in achieving the curriculum's learning targets". Chilora et al. (2003, p. 4) describes CA as "making observations and collecting information periodically to find out what a learner knows, understands and can do". Teachers collect learners' information based on cognitive, affective and psychomotor learning tasks (Falayalo, 2005). In CA, teachers adapt their pedagogical strategies to meet the needs of the learners so that all have the chance to learn and succeed. The activities in CA are numerous and

diverse to speak to the learners' different learning styles and level of mastery of concepts. By continuously observing learners to see what they know and can do, each learner's needs are promptly addressed; hence, all learners have a chance to succeed. (Chilora et al., 2003).

1.2 Curriculum and assessment reforms in Malawi

The first central primary curriculum in Malawi was introduced after the establishment of Blantyre secondary school in 1940 (Kabwila, 1995 in Chirwa & Naidoo, 2014). After independence in 1964, the primary curriculum was reviewed first in 1982, then in 1991 and lastly in 2007 (Chirwa & Naidoo, 2014). All the reviews were aimed at improving the quality of education. However, all the previous curricula have been criticised for having large number of subjects and being examination oriented which made teachers to concentrate on examinable content at the expense of other equally important subjects such as Music, Physical Education and Creative Arts. Hence, teachers rushed through the syllabus (Chirwa & Naidoo, 2014). Thus, the needs of individual learners were not addressed. The 2007 National Primary Curriculum (NPC) was therefore meant to respond to the concerns of the public.

While the Primary Curriculum and Assessment Reform (PCAR) consultations were in progress since 2001, the Ministry of Education also instituted a survey to review and assess the testing and assessment practices and student promotion system operating in primary schools at that time. The team was also mandated to propose and develop new testing and assessment practices and students promotion system (Kadzamira et al., 2004).

The results from the study revealed that testing and assessment in the schools did not promote effective teaching and learning; hence, the researchers recommended the introduction of classroom based approaches to assessment and continuous assessment was the most favoured (Kadzamira et al., 2004). This led to the change of the assessment policy which was embedded into the 2007 NPC.

Terry (1977) defines a policy as an overall guide that gives the general limits and direction in which administrative actions take place. Okoroma (2006) contends that a policy defines the area in which decisions are to be made but it does not make decisions. Teachers therefore have the liberty to make final decisions on what, how and how many times to actually assess the learners in their classes due to many factors such as time. This may affect the value derived from the learners' assessment and the assessment policy.

1.3 Assessment policy in Malawi

The assessment policy is embedded in the NPC developed under the Primary Curriculum and Assessment Reform. The NPC was rolled out in primary schools first in standard one in 2007 (Chirwa & Naidoo, 2014). By 2010, the NPC had rolled out to all standards in primary schools (Chulu & Chiziwa, 2010; Gunsaru & Kaambankadzanja, 2007). Thus, by 2010 all primary school teachers were expected to implement the assessment policy.

1.4 Mode of assessment in Malawi

Assessment comprises of two major components: (a) summative assessment and (b) continuous assessment throughout the primary cycle in Malawi (Ministry of Education, 2009). Teachers are required to administer both CA and SA in every subject in their classes and keep a record of all assessments.

1.4.1 Summative assessment

Summative assessment is a process of obtaining information covering a specific period of time or course of study for making decisions about students. It is used to determine a learner's progress at pre-defined times. It is usually done at the end of a topic or at the end of a week, term or year (Ministry of Education, 2009). However, the primary assessment policy in Malawi requires teachers to administer one SA per term (end of term test). There are three terms in a year. Hence, three summative assessments are administered in a year. Usually, they take the form of tests and examinations. Summative assessment is more important to parents and schools authorities than to teachers and learners themselves (Nitko & Brookhart, 2007; Malawi Institute of Education, 2008) unlike CA which is more important to the learner and the teacher.

1.4.2 Continuous assessment

Continuous assessment refers to "making observations periodically to find out what a learner knows, understands and can do" (Chilora et al., 2003, p. 4). It is an individualised form of assessment in which learners are assessed in each learning activity (Ministry of Education, 2006 in Chirwa & Naiddoo, 2014). Teachers are required to administer a

minimum of one CA every fortnight in each subject or learning area, (Chulu & Chiziwa, 2010; Ministry of Education, Science and Technology, 2014). On average a term has 13 weeks. This translates to a minimum of six CAs in a term. Teachers are also required to keep a record of the assessment grades which are a combination of CA and SA and report the results to learners, parents or guardians, school heads and other stakeholders, (Ministry of Education, Science and Technology, 2010). The policy, therefore, ensures consistency of action (Okoroma, 2006) because teachers are governed by approved principles. However, there are reports that teachers fail to assess learners regularly as required by the policy (MACRO (2008).

At the end of the each term, the CA and SA scores are integrated to find the end of term grade. The three end of term grades are further integrated to find the annual evaluation which is used to determine whether to promote a learner to the next class or not. Figure 1.1 below summarises the assessment policy.

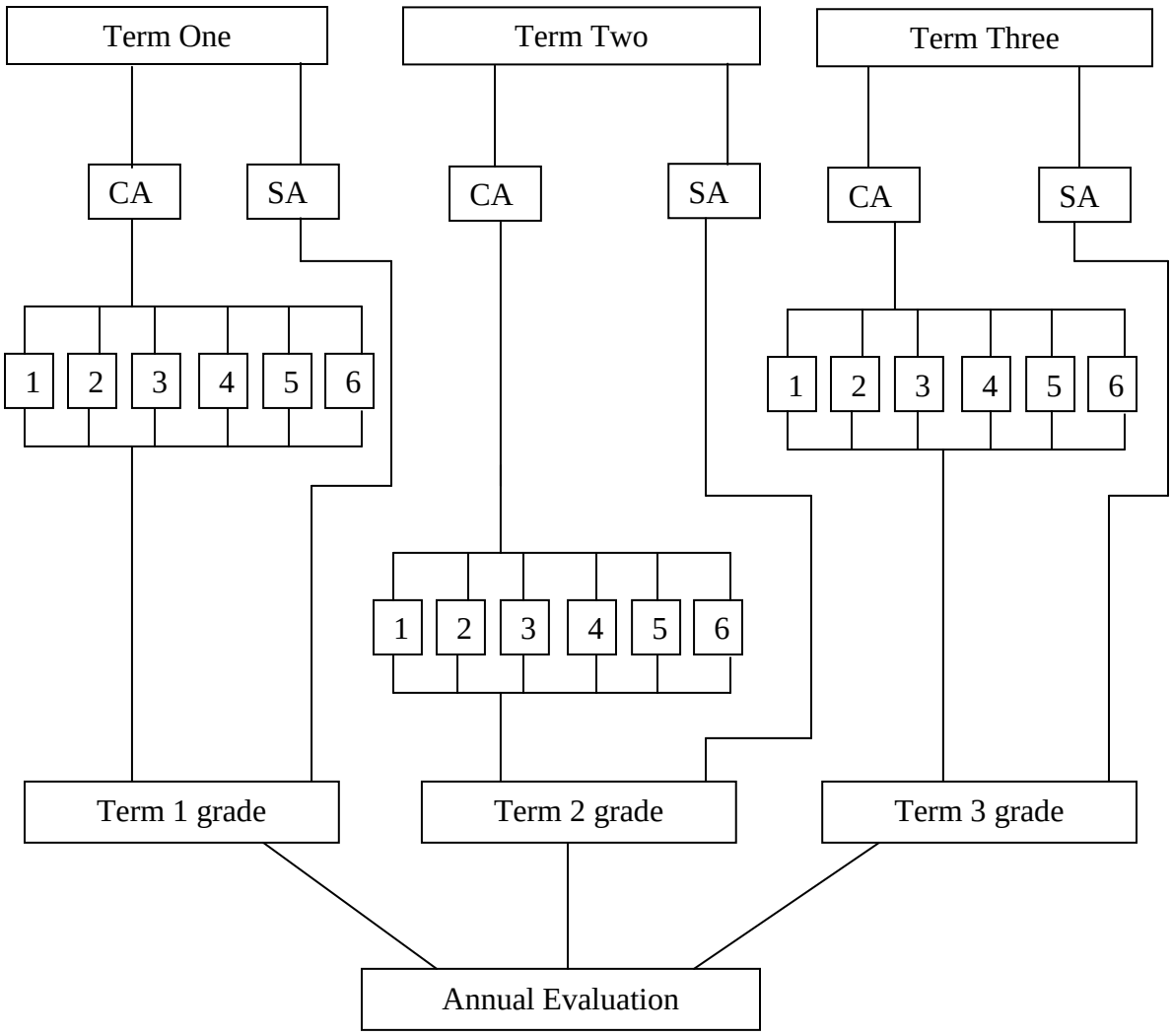

Figure 1.1: Assessment policy in Malawi

Summarised from: Ministry of Education, Science and Technology (2010, pp.146 – 148)

According to Van Horn & Van Meter (1977) as cited in Okoroma, (2006), unsuccessful implementation of the policy could be due to: (1) the communication process as messages may get distorted through the process (2) dispositional conflict and (3) capacity problem: where the ability to implement policies may be hindered by such factors as incompetent

staff, insufficient information, lack of political support, inadequate financial resources, and impossible time constraints.

In addition, Wood-Robinson (2003) argues that many attempts to bring about educational change fail to achieve the intended goals because teachers are not brought into the curriculum development process, re-training workshops alone are ineffective in re-training teachers and re-training programmes rarely address teachers' individual needs and concerns. This emphasises the role of effective training of teachers prior to the implementation of policy change. In Malawi, during PCAR implementation, five day workshops were organised to orient teachers on the new NPC which contains the new assessment policy. However, 99% of the teachers and 99% of the Primary Education Advisors (PEAs) reported during PCAR midterm review that CA issues were not satisfactorily covered and there were still grey areas that required clarification (Chulu & Chiziwa, 2010).

1.4.3 Learning areas or subjects and assessment

The NPC is divided into learning areas in the lower primary (standard 1 to 4) and subjects in the upper primary (standard 5 to 8). The curriculum has nine learning areas or subjects. It starts with less learning areas in the lower primary and slowly increases toward the upper primary. Table 1.1 below summarises the distributions of learning areas or subjects by class.

Table 1.1: Learning areas or subjects in the NPC

8 years	**Learning Areas (standard 1 – 4), Subjects (Standard 5 – 8)**								
Standard 1 Term 1	Introduction to school life and learning								
Standard 1	Chich	Eng	NM	EA	BK/RE				
Standard 2	Chich	Eng	NM	EA	LS	BK/RE			
Standard 3	Chich	Eng	NM	EA	LS	SES	BK/RE		
Standard 4	Chich	Eng	NM	EA	LS	SES	AST	BK/RE	
Standard 5	Chich	Eng	Math	EA	LS	SES	Agr	ST	BK/RE
Standard 6	Chich	Eng	Math	EA	LS	SES	Agr	ST	BK/RE
Standard 7	Chich	Eng	Math	EA	LS	SES	Agr	ST	BK/RE
Standard 8	Chich	Eng	Math	EA	LS	SES	Agr	ST	BK/RE

Key

Chich: Chichewa

Eng: English

NM: Numeracy and Mathematics

Math: Mathematics

EA: Expressive Arts

LS: Life Skills

SES: Social and Environmental Sciences

Agr: Agriculture

AST: Agriculture Science and Technology

ST: Science and Technology

BK: Bible Knowledge

RE: Religious Studies

Source: Ministry of Education (2009, p. 11)

All the learning areas or subjects are core subjects. Thus, they are equally assessed. English and Chichewa belong to the literacy and languages family, Numeracy and Mathematics or Mathematics, Agriculture and Science and Technology belong to the science family while Expressive Arts, Social and Environmental Sciences, Life Skills, Bible Knowledge and Religious Studies belong to the social studies and expressive arts

family. Schools choose to teach either Bible Knowledge or Religious Studies. In order to achieve a representation of all subjects, the study utilised one subject from each family. Thus, the study used English, Mathematics and Expressive Arts as representatives of other subjects in their subject families. Teachers are expected to assess all learners in all the subjects so that adequate support is provided. To achieve this, different methods and techniques are utilised. The next section discusses continuous assessment methods and techniques used by teachers.

1.5 Continuous assessment methods and techniques

Assessment is a broad term defined as a process of obtaining information that is used for making decisions about learners, curricula, programmes, schools and educational policy (Nitko & Brookhart, 2007). Information is obtained for making specific educational decisions. Hence, assessment can be in different modes such as formal and informal assessment, final and continuous assessment, formative and summative assessment and internal and external assessment (Malawi Institute of Education, 2008). Malawi has adopted a combination of continuous and summative assessment mode. Each mode has specific targets; therefore, teachers are expected to demonstrate an understanding of different assessment methods and techniques to obtain relevant information needed to support the learning needs of individual learners.

According to Chilora et al. (2003), CA allows teachers to monitor the impact of their lessons on learners' understanding. Ahukanna, Omu, & Uka (n.d.) asserts that CA takes account of the learners' performance during a given period of schooling. Continuous

assessment therefore calls for total commitment of the teachers to plan and develop tools, administer, mark and record continuous assessments and provide feedback to both learners and parents.

Nitko & Brookhart (2007) argues that assessment should provide learners with opportunities for determining specifically what they have achieved and what they must do to improve their performance. To achieve this, CA can be carried out in many ways which include observations, exercises, research papers, projects, exhibits, performance, portfolios, oral questions, lab work, anecdotal reports, assignments, class work and analyses of learner work (Obioma, n.d.; The Essence of Continuous Assessment, n.d.; Du Plessis, Prouty, Schubert, Habib & George, 2003; Nitko & Brookhart, 2007).

It is argued that one format of assessment provides incomplete picture of what a learner has learnt (Nitko & Brookhart, 2007). Nitko & Brookhart (2007) also emphasizes that teachers need to become competent in selecting and using assessment. One of the standards for teacher competence in educational assessment is the skill of choosing assessment methods appropriate for instructional decisions. That's why primary school teachers in Malawi were trained when the NPC was first rolled out. However, MACRO (2008) observes that nearly all teachers and PEAs rated the five day PCAR workshop orientation as inadequate. This poses a challenge to continuous assessment. Teachers may not have the competence to administer CA to achieve the intended purpose.

1.6 Role of continuous assessment in Malawi

Effective teaching and learning can only take place if the learner, educator and content are constantly assessed. Malawi Institute of Education (2008) states that CA gives the class teacher and learner feedback, information about whether the learning outcomes are being achieved, information on areas of strengths and weaknesses and acts as motivation to students. Feedback refers to information about how a learner or a teacher can improve his or her work based on observation and diagnosis of performance on CA (Nitko & Brookhart, 2007). Teachers diagnose learners' areas of strengths and weaknesses and provide appropriate support while at the same time identifying their own strengths and weaknesses. Learners too reflect on their work to judge its quality against learning targets and decide what action they need to take to improve. Success on CA is an indication of achievement of learning outcomes hence a motivation to both the learner and the teacher. Hence, CA is believed to contribute actively to creating conditions for enhancing the quality of teaching and learning as an inherent component of daily routines of classroom life (Hargreaves as cited in Kapambwe, 2010). Milner, Mulera & Chimuzu, (2011) report that in SACMEQ III in 2007 the competence levels for the majority of the learners in Malawi in reading were at 2, 3 and 4 while 4.8% were at level 5, 1.4% were at 6 and 0.6% were at 7. Only 0.2% of the learners reached level 8. Similarly, the competence levels in Mathematics for most learners during SACMEQ III were at levels 2, 3 and 4. Even though, CA was intended to support teaching and learning, the quality of education has continued to drop. Between 2008 and 2013, the survival rate at standard five declined from 76.2 to 64.0 while that of standard eight declined from 52.1 to 31.0 (Education Management Information System, 2014). Survival rate is the percentage of a cohort of

learners enrolled in standard one in a given school year who are expected to reach successive classes (Education Management Information System, 2014). This could be a result of either repetition of classes or withdraw which are indicators of inadequate support the very role CA is expected to offer.

1.7 Challenges to continuous assessments

In spite of the potential positive effects, CA is marred by numerous challenges. Mchazime (2003) reports that the results of CA from the feasibility study done in Ntcheu in 2002 revealed that CA leads to improved learner achievement. However, teachers attributed the success to the incremental professional training that teachers received at regular interval, the regular field support, community involvement and the team spirit which created an ideal situation where the policy guidelines were followed. During the study, teachers, School Management Committee (SMC), Teacher Training College lecturers, Primary Education Advisors (PEAs), officials from the Department of Inspectorate and Advisory Services at the Ministry of Education headquarters and officials from Malawi Institute of Education (MIE) worked as a team. Training workshops were organised regularly for teachers and the SMC members. In addition, frequent supervisory visits to schools were made to monitor the progress and provide support where necessary. But this kind of support is not evident in the normal school setting. Nevertheless, Mchazime (2003) noted that CA can be time consuming in a large class.

In addition, during the Malawi Education Assessment, MACRO (2008) observed that the requirement to make regular (daily or weekly) assessment of each learner's performance at the same time teaching was one of the main problems of CA in Malawi. But, CA plays a diagnostic role that identifies the learners' individual learning needs which are vital when supporting the learners in their day to day school work. This can only be achieved if teachers are familiar with relevant continuous assessment tools and methods to be used. Thus, teachers' competence in developing and using appropriate continuous assessment tools in paramount. Hence, the researcher wonders if continuous assessments administered under such situations add value to teaching and learning.

However, Chulu & Chiziwa (2010) reports that teachers have problems developing and using assessment tools as well as problems with assessing learners every fortnight as required by the policy. Moreover, it is revealed that teachers spent much of their valuable time filling records and developing assessment tools than teaching and preparing for teaching. However, continuous assessment is supposed to be an integral part of teaching and learning. Whether CA adds value to teaching and learning in this situation is debatable. While studies have revealed a number of challenges to CA, they have remained silent on the actual continuous assessment practices and the value they add to teaching and learning. It is from this background that a study to investigate the actual continuous assessment practices taking place in primary schools and the value they add to teaching and learning was deemed necessary.

1.8 Statement of the problem

Studies after the introduction of CA in primary schools in Malawi in 2007 have shown that orientation workshops were inadequately done (MACRO, 2008). Teachers (99%) and Primary Education Advisors (99%) reported during the PCAR midterm review that continuous assessment issues were not adequately covered and that there were still grey areas that required clarification; hence, teachers had problems developing and using assessment tools (Chulu & Chiziwa, 2010). However, under PCAR, CA is seen as an on going process of gathering valid and reliable evidence of learners' learning achievement against clearly defined criteria using a variety of tools, methods and techniques in different situations and contexts (PCAR Framework, 2004). But due to inadequate training and time constraints, teachers struggle to use several CA components of different types. Does CA continue to have value even when fewer components are given to learners? It is therefore necessary to find out if CA indeed supports and promotes teaching and learning.

1.9 Purpose of the study

The purpose of the study was to investigate the continuous assessment practices that are actually taking place in primary schools under PCAR and the value they add to teaching and learning.

1.10 Research Questions

The study was guided by the following questions:

1. How many continuous assessments do teachers give learners per school term?
2. What type of continuous assessment tasks do teachers give learners?
3. What association exists between performance on continuous assessment and performance on summative assessment?

1.11 Research hypothesis

The study was also guided by the following hypothesis:

There is no relationship between learners' performance on continuous assessment and performance on summative assessment.

1.12 Significance of the study

A few studies have been carried out on CA in primary schools in Malawi and Karonga in particular. However, CA raises debate amongst all stakeholders with a view of improving education standards. The findings of this study will therefore contribute to theory, policy and practice in many ways. To begin with, the findings from the study will contribute an explanation of the impact of CA on the performance of learners on summative assessment. Secondly, the findings will help the Malawi National Examinations Board (MANEB) and other policy makers to decide if the CA practices in primary schools conform to the assessment policy and whether the results from such practices could be used to make final evaluation of the learner's performance. Last but not least, the research results will inform the teacher trainers of the numerous continuous

assessment techniques being utilized in primary schools so that they can emphasise on them and critically reflect on those techniques that are taught during the course of teacher training but are not used by teachers in schools.

1.13 Chapter summary

This chapter has discussed the background of CA in Malawi by presenting the curriculum and assessment reform, assessment policy, modes of assessment, CA methods and techniques, roles and challenges of CA, the statement of the problem, purpose of the study, research questions, hypothesis and significance of the study. Continuous assessment as an integral part of teaching and learning supports learners' individual learning needs hence has the potential to improve the quality of education. However, CA is marred by a number of challenges. It is reported that teachers were not adequately trained during PCAR orientation. Moreover, teachers are finding it difficult to assess learners regularly as required by the policy due time constraint. While earlier studies have focused on challenges of continuous assessment, they are silent on the actual CA practices and the value they add to teaching and learning. It is from this view that it was deemed necessary to investigate the actual continuous assessment practices and the value they add to teaching and learning in primary schools in Malawi.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Chapter overview

The chapter discusses the available literature both nationally and internationally. It starts with conceptualising continuous assessment, then discussions of the conceptual framework, assessment policy in Malawi, continuous assessment mode, CA methods and techniques, roles of CA and lastly studies conducted both globally and locally.

2.1 Conceptualising continuous assessment

Nitko & Brookhart (2007) defines CA as the daily process by which a teacher gathers information about learners' progress in achieving the curriculum's learning targets. Nitko & Brookhart (2007) sees CA as on going not a once for all assessment. In addition, to achieve curriculum learning targets, teachers are required to use different assessment techniques. In this perspectives, CA is formative in nature.

Falayalo (1986) as cited in Adaramaja (n.d.) defines CA as a mechanism whereby the final grading of learners in the cognitive, affective and psychomotor domains of learning systematically takes into account all their performances during a given period of schooling. This is a holistic approach to CA. It entails that continuous assessment should support the development of a learner as a whole. Assessment in the cognitive domain

deals with knowledge and understanding while affective domain deals with attitudes, feelings, interests, dispositions, values and emotional state (Kubiszyn & Borich, 2003; Nitko & Brookhart, 2007; Adaramaja, n.d.) and the psychomotor domain is associated with motor skills such as speaking, writing, jumping, throwing, catching, running, walking, opening a door, dancing (Nitko & Brookhart, 2007). In addition, Nitko & Brookhart (2007) sees CA as cumulative in nature. Learner's performance on all assessments is taken into consideration during the final evaluation of the learner's performance.

According to Chilora et al. (2003, p. 4) and Du Plessis et al. (2003, p. 7), CA refers to "making observations and collecting information periodically to find out what a learner knows, understands and can do". Chilora et al. (2003) and Du Plessis et al. (2003) see CA as planned, on going and holistic. This implies the use of different assessment techniques to collect information on learners' performance in all the learning domains and at all levels of the taxonomy of educational objectives. Teachers are therefore required to adapt their assessment practices to meet the individual needs of a learner.

This study adopted the definition by Chilora et al. (2003) and Du Plessis et al. (2003). Thus, for teachers to effectively carryout continuous assessment practices, they should assess learners' performance in all the three learning domains using a variety of methods and techniques. In addition, CA practices should not only target the class as whole but also individual learners in order to provide the required support. This entails that teachers are expected to track the performance of all the learners so that they are assisted to

develop progressively toward the attainment of the educational goals. In this way, all learners could be given a chance to succeed in school.

Progressive development of learners requires a well coordinated support from teachers. Teachers teach and assess learners based on the educational objectives (developmental outcomes) stipulated in the curriculum which are refined into primary outcomes (what a learners should know and be able to do after learning a core element (main topic)) which is further broken down into assessment standards (descriptions of competences to be acquired by learners for successful learning of a core element) which is finally broken into success criteria (an intended outcome spelling out specific knowledge, skills and attitudes by the end of a lesson) (Malawi Institute of Education, 2008). To assist the learners develop complex skills, success criteria are developed using the action verbs at each level of the knowledge dimension based on Benjamin Bloom's analysis from the lowest level (knowledge) to the highest level (evaluation).

2.1.1 Taxonomy of educational objectives for cognitive domain

Benjamin Bloom categorised educational objectives according to cognitive complexity into six levels (Nitko & Brookhart, 2007; Kubiszyn & Borich, 2003) popularly known as the Bloom's Taxonomy. Each level has different characteristics and hierarchical in nature. Figure 2.1 summarises the six levels.

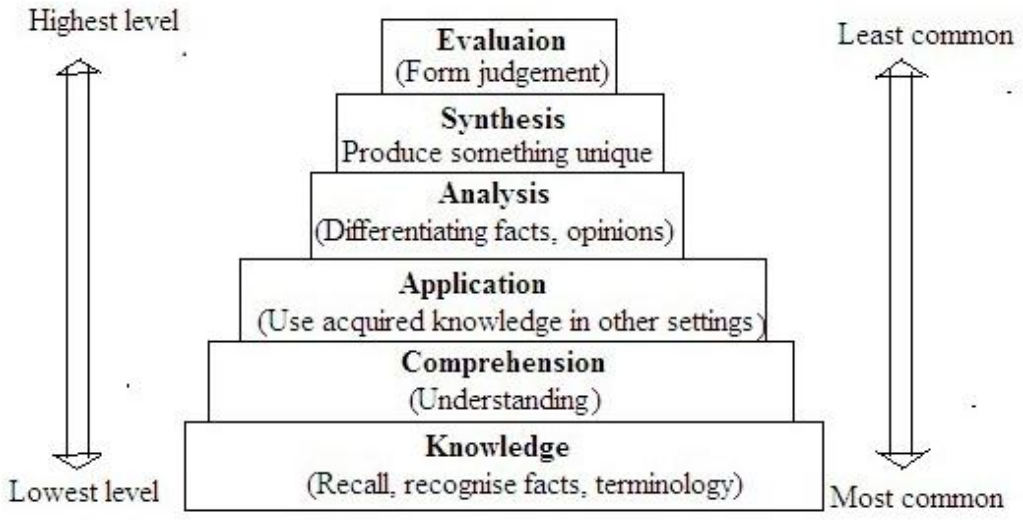

Figure 2.1: Bloom's Taxonomy of the cognitive domain

Adopted from: Kubszyyn & Borich (2003, p.86)

In continuous assessment, teachers develop CA tasks based on the assessment standards. Like success criteria, assessment standards are prepared according to levels of knowledge dimension of the Bloom's taxonomy. Good continuous assessment practices require teachers to prepare and administer CA tasks that measure learners' ability at all levels of the Bloom's taxonomy.

2.2 Conceptual Framework

The study was guided by the continuous assessment model adopted from Chilora et al. (2003). The continuous assessment model describes CA as a process that fosters dialogue among teachers, learners and parents to bring about the learner's best learning. It is holistic in nature and does not only bring various stakeholders together but also integrates assessment and teaching as interconnected activities that are integral to child's learning. The holistic approach to CA acknowledges that children do not learn in the same way and

at the same pace. Thus, under holistic approach, teachers respond to the individual as well as the collective needs of learners. Therefore, through continuous assessment, teachers teach according to learners' performance. Continuous assessment activities are therefore many and varied to speak to learners' different learning styles and levels of mastery of concepts. Figure 2.2 summarises the continuous assessment model.

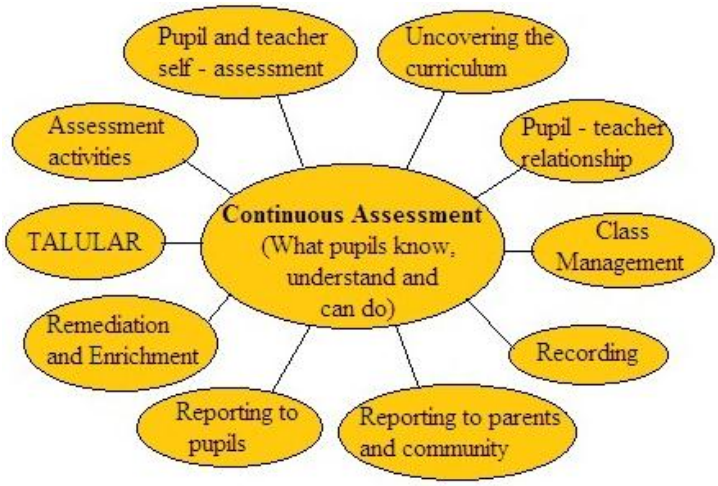

Figure 2.2: Continuous assessment model: A holistic approach

Adopted from: Chilora et al., (2203, p.9)

In the first place, the continuous assessment model emphasises on uncovering the curriculum. This means that teachers do not simply teach to complete the curriculum but see the needs of learners and help them to learn at their own pace. The teachers' focus is not only at completing the syllabus but also ensuring that all learners understand the concepts before moving on. Thus, all learners have a chance to progress academically.

Secondly, the model emphasises on pupil – teacher self assessment. Self assessment involves judging the quality of one's own work against clearly defined learning targets and deciding actions to be taken in order to improve (Nitko & Brookhart, 2007). In CA, therefore, teachers reflect on their teaching and learning and learners reflect on what they know, understand and can do to improve their performance. Thus, both teachers and learners shoulder responsibility over the learners' success.

In addition, the model encourages pupil – teacher relationships. This inspires on going dialogue between teachers and learners. Teachers use motivating language before, during and after assessment to reduce learners' fear of being assessed. Ultimately, this develops positive attitude between teachers and learners. It is argued that learners who have a positive attitude towards teachers and school work do well in most school activities (Malawi Institute of Education, 2008). Conversely, teachers who have a positive attitude towards learners tend to teach and support learners well.

Moreover, the model encourages the use of TALULAR. Teachers are encouraged to be creative and resourceful in teaching and learning through the use of locally available resources. TALULAR helps to bring real life situation into the class which learners are familiar with. Learners understand concepts better. Hence, learners easily bring to memory what they learnt in class and demonstrate their understanding and skills during CA.

Furthermore, in holistic model of CA, teachers conduct varied assessment activities periodically. According to the model, CA is on going. Teachers administer several CA activities targeting all the three learning domains, cognitive, affective and psychomotor. The assessment activities also target all the levels of knowledge dimensions of the cognitive domain. These activities progress from the knowledge level up to evaluation. Thus, CA should respond to the needs of both the class and individual learners. Learners are informed when they are going to be assessed.

Recording is another important tool in the holistic continuous assessment model. Teachers record learners' grades timely and consistently. This provides an accurate picture of learners performance at all times. Hence, teachers find it easy to communicate the performance of the learners to parents and community. This fosters dialogue among parents, teachers and learners thereby improving community involvement.

The model also requires teachers to acquire simple classroom management strategies. Since CA is mostly done during the course of teaching and learning, effective class management skills are vital. These strategies are used when conducting CA either on one – on – one, in groups or whole class. Remediation and enrichment are also important tools in the CA model. By using continuous assessment, teachers learn to teach to the multiple levels of knowledge, skills and application to ensure that all learners learn. This ensures that all learners receive the much needed support from their teachers. Remediation is provided to slow learners while enrichment is given to fast learners.

Last but one, the CA model encourages reporting of assessment results to learners. Teachers provide feedback to the learners so that they know what areas they need to work on for the next time they are going to be assessed. Teachers give feedback on the basis of observation and diagnosis of learners' performance on continuous assessment activities (Nitko & Brookhart, 2007). Teachers therefore monitor the performance of learners. This helps learners to remain focused on educational objectives.

Last but not least, the model encourages reporting to parents and community on learners' performance. Through CA, teachers effectively communicate to parents and community learners' progress since they have up to date information of all learners. This improves school – community relations. The community is taken on board to support the education of their children. Eventually, learners' performance improves.

The holistic continuous assessment model was a central tool throughout the study. The study was mainly guided by two concepts from the model, uncovering the curriculum and assessment activities, but supported by other concepts where necessary. In continuous assessment, teachers are required to use different assessment techniques to collect information on learners' performance in all the learning domains and at all levels of the taxonomy of educational objectives. This ensures that the needs of all learners are met. This corresponds to the concept of 'assessment activities' in the continuous assessment model which advocates for the use of a variety of assessment activities to speak to the individual needs of the learners. This concept captures the concerns of questions one and two of this study.

In addition, in CA, the continuous assessment practices are not only expected to target the class as whole but also individual learners in order to provide the much needed support. This entails that teachers are expected to keep track of all the learners so that they are assisted to develop progressively toward the attainment of the educational goals. In this way, all learners are given a chance to succeed in school. Similarly, the CA model holds that teachers do not simply teach to complete the curriculum but see the needs of learners and help them to learn at their own pace. The teachers' focus is not only at completing the syllabus but also ensuring that all learners understand the concepts. This corresponds to the concept of 'uncovering the curriculum' in the continuous assessment model. This concept captures the concerns of questions three of this study.

2.3 Characteristics of effective continuous assessment

The holistic continuous assessment model presented above upholds that CA is a way to ensure that all learners have opportunities to succeed in school. By properly using CA, teachers adapt their instruction to the needs of the learners so that all have the chance to learn and succeed (Chilora et al., 2003). Adaramaja (n.d.) and Osuji (n.d.) identify four characteristics of CA as follows:-

- Systematic nature of continuous assessment
- Comprehensive nature of continuous assessment
- Cumulative nature of continuous assessment
- Guidance-oriented nature of continuous assessment

To begin with, continuous assessment is systematic in nature in the sense that it requires an operational plan indicating what measurement are to be made, at what intervals or times during the school years and the assessment techniques to be used. Thus, continuous assessment is well coordinated.

In addition, CA is comprehensive in nature because numerous assessment techniques are used to determine the learners' performance. Teachers choose an assessment technique based on the purpose and skills to be assessed. Moreover, continuous assessment is cumulative in nature. In CA, any decision to be made at any point in time on the learner takes into consideration all the previous decisions about the learner. Thus, CA assesses a learner over a period of time.

Lastly, continuous assessment is guidance-oriented in nature. In CA, information gathered about children is used to guide the learners' placement, career prospects, vocational training and further education. One of the main values of continuous assessment in education is its ability to identify areas of strengths and weaknesses in learners' performances, teachers' instructional strategies and the educational programme.

2.4 Assessment policy

The assessment policy in Malawi comprises of continuous assessment and summative assessment (Ministry of Education, 2009). Continuous assessment is used for improving learning because it provides feedback to learners. Thus, CA monitors and supports the learning and teaching process.

On the other hand, SA is used to determine a learner's progress at pre-defined times. It is usually done at the end of a topic, at the end of the week, term or year (Ministry of Education, 2009). It gives a snapshot of a learners' performance. Tests and examinations are often the activities used for summative assessment. Summative assessments like Primary School Leaving Certificate Examinations (PSLCE) are high stake tests which are commonly used for promotion and graduation decisions for both educational as well as accountability purposes (Kubiszyn & Borich, 2003). However, in Malawi teachers integrate continuous assessment and summative assessment to obtain the end of term grade (Ministry of Education, Science and Technology, 2010).

Teachers are required to administer at least two CAs in a month (every fortnight) which translates into not less than six CAs per term (Chulu and Chiziwa, 2010). Summative assessment is administered at the end of the term for standards 3 to 8. At the end of the term, the scores obtained from CAs and SAs are integrated to obtain one score for the term. Table 2.1 shows the weighting for continuous and summative assessment:-

Table 2.1: Weighting of continuous assessment and summative assessment

Phase	**Continuous Assessment**	**Summative Assessment**
Infant (Standard 1 and 2)	100 %	
Junior (Standard 3 and 4)	60 %	40 %
Senior (Standard 5 to 8)	40 %	60 %

Summarised from: Ministry of Education, Science and Technology, (2010, p. 153)

PCAR distinguishes four levels of achievement in order to compare learners' performance (Ministry of Education & Malawi Institute of Education, 2008; Malawi Institute of Education, 2008; Ministry of Education, Science and Technology, 2010). The levels are expressed in percentages and in terms of satisfaction of requirements as summarised in table 2.2 below:-

Table 2.2: Levels of achievement

Level of achievement	**Percentage of fulfilment of requirements**	**Level of satisfaction of requirements**
4 (Excellent)	80 – 100	Learner's performance has satisfied the requirements
3 (Good)	60 – 79	Learner's performance has satisfied most of the requirements
2 (Average)	40 – 59	Learner's performance has partially satisfied the requirements
1 (Needs support)	0 – 39	Learner's performance has not satisfied the requirements

Source: Ministry of Education & Malawi Institute of Education, (2008, p. 2)

The policy also requires teachers to provide feedback to learners and parents or guardians (Ministry of Education, Science and Technology, 2010). Ministry of Education & Malawi Institute of Education, (2008) advices teachers that it is important that the comments on the report card are written in a language that can be understood by the parents. Teachers are further advised that after the parent or guardian has signed on the report card, the report card should be kept in each of the learner's portfolio.

2.5 Continuous assessment methods and techniques

In order to assess learners holistically, teachers are expected to have a sound knowledge of various CA methods and techniques. Under holistic approach to CA, teachers respond to the individual as well as the collective needs of learners. Many and varied CA activities are used to speak to learners' different learning styles and levels of mastery of concepts (Chilora et al., 2003). Therefore, a variety of methods and techniques corresponding with the learners' needs must be used. The chosen methods and techniques must provide a range of opportunities for learners to demonstrate knowledge, skills, values and attitudes.

The common continuous assessment methods and techniques are paper and pencil, oral assessment, observations, performance assessment, projects, practical work, portfolios and anecdotal records (Malawi Institute of Education, 2008; Nitko & Brookhart, 2007). Paper and pencil is composed of two types. The first type is objective questions. Examples of objective questions include multiple choice items, matching items, true – false items and gap or blank filling items. The second type is free response questions which could be either structured questions or essay questions (Malawi Institute of Education, 2008).

The presence of many continuous assessment methods and techniques is in line with the demands of the concept of 'assessment activities' of the continuous assessment model which advocates for the use of many and varied CA methods and techniques. Thus,

teachers have an opportunity to choose a technique that would give the require results and at the same time meet the needs of both the class and individual learner.

2.5.1 Portfolio

One continuous assessment technique that emerged at the same time continuous assessment policy was introduced in primary schools is portfolio assessment. Teachers are required to keep portfolios for themselves and every learner in their classes. The American Heritage Dictionary defines a portfolio as a collection of materials representing a persons' work (Houghton Mifflin, 1982). Portfolios therefore provide evidence of a persons' ability in a particular skill or subject. A portfolio can either be learner's or teacher's portfolio.

2.5.1.1 Teacher's portfolio

A teacher's portfolio is a collection of all assessment tasks or items as well as assessment instruments. Thus, items in the teacher's portfolio act as evidence that an assessment was conducted (Ministry of Education, Science and Technology, 2010).

2.5.1.2 Learner's portfolio

Ministry of Education, Science and Technology (2010) defines learner's portfolio as a deliberate collection of learners' own work for future reference. Thus, portfolio is not seen as an assessment technique but a storage facility. Kubiszyn & Borich (2003) defines a learner's portfolio as a planned collection of learners' achievement that documents what a learner has accomplished and the steps taken to get there. The collection represents a

collaborative effort between the teacher and the learner to decide on the portfolio purpose, contents and evaluation criteria. In this sense, Kubiszyn & Borich (2003) view a portfolio as an assessment technique in which both teachers and learners take active roles. Butter & McMunn (2006) defines portfolio as a purposeful, integrated collection of learners work showing effort, progress or a degree of proficiency. Similarly, Du Plessis et al. (2003) define a portfolio as a systematic collection of learners work over a year, term or topic. Systematic or purposeful collection means that not everything that comes in the way goes into the portfolio but there is a criterion for deciding what to put in the portfolio. Thus, Butter & McMunn (2006) and Du Plessis et al. (2003) see portfolio as leading to evaluation of the learner. This therefore means that a portfolio is an assessment technique not a storage facility. Cardboard boxes, folders, filing cabinets, note books can be used as portfolios (Du Plessis et al., 2003, Malawi Institute of Education, 2008).

Learner's portfolio can be kept by the learner or the teacher. Each learner has one portfolio with sections representing each learning area or subject. The contents may include learner's composition, projects, artefacts, artwork, journals, assignments, exercises, essays, models, written tests and many more (Ministry of Education, Science and Technology, 2010; Slavin, 2006).

2.5.1.3 Types of learner's portfolio

Butter & McMunn (2006) describes five types of learner's portfolios based on the purpose underlying the collection of artefacts.

The first type of learners' portfolio is the best-work portfolio. Only the best work is included in the portfolio such as drawings, painting, photographs and written work. Thus, it provides proof that a learner has mastered techniques, skills or exhibited talent.

The second type is the memorabilia portfolio. This is a collection of memorabilia (collectables). Learners record their experiences in their scrapbooks. It reveals much about the learners' attitudes, interests and self-esteem.

Another type is the growth portfolio. In these portfolios, different learners' work is kept to show change over time. They help learners focus on their own learning and reveal to others the progress the learner has made.

The fourth type is the skills portfolio. The owner of the portfolio assembles documentation to verify attainment of proficiency at a particular skill or set of skills. A skills portfolio therefore provides evidence on what a learner knows and is able to do.
Last but not least, assessment, proficiency or promotion portfolio is another type. It is a collection of learners work that show learners growth toward a proficiency in standard of learning. Such portfolios provide evidence that is used to judge whether a learner should be promoted out or retained at a grade level. High quality, valid and reliable evidence that is aligned to standards addressed within a grade only is kept.

The effectiveness of the continuous assessment methods and techniques depends on the purpose for which it is used. Teachers select an assessment method or technique based on

the type of information they would like to collect. The next section discusses the role of continuous assessment.

2.6 Role of continuous assessment

Nxumalo (2007) states that the role of CA is to monitor a learner's progress through an area of learning so that decisions can be made about the best way to facilitate further learning in terms of expected knowledge, skills, attitudes and values. In view of this, CA plays important role to both the teacher and the learner. Du Plessis et al. (2003) see CA as a way to ensure that all learners have opportunities to succeed in school. Teachers adapt their instruction to the needs of the learners so that all have the chance to learn and succeed. By continually observing the learners to see what they know, understand and can do, teachers make sure that no learner fails. Continuous assessment therefore has several roles.

2.6.1 Providing feedback

Continuous assessment gives teachers and learners' feedback on whether the learning objectives are being achieved (Malawi Institute of Education, 2008, USAID Mission, 2003). In so doing, CA allows teachers to monitor the impact of their lessons on learners' understanding. Teachers modify their pedagogical strategies to include remediation activities for learners who are not working at expected grade level and enrichment activities for learners who are working at or above the expected grade level. Hence, CA supports a cycle of self-evaluation and the preparation of leaner-specific activities. Through on going feedback, learners know if they are learning or not (USAD Mission,

2003; Chilora et al., 2003). This helps them identify what to focus on in their improvement effort.

2.6.2 Identifying areas of weakness, strength and potential

Through frequent interaction, CA acts as a powerful diagnostic tool to provide information on the areas of weakness, strengths and potentials to both teachers and learners (Malawi Institute of Education, 2008; USAID Mission, 2003; Chilora et al., 2003). Teachers catch the learners' mistakes and misunderstandings before it is too late and find ways of teaching learners who are not learning. On the other hand, learners identify areas of difficulty and concentrate their effort on those areas. The interaction therefore fosters teacher-learner relationships; hence, learners learn that teachers value their achievement and that their outcomes have an impact on the instruction they receive.

2.6.3 Form of attention, encouragement and motivation

Continuous assessment is also a form of attention and encouragement and an important ingredient of motivation (Malawi Institute of Education, 2008; Chilora et al., 2003). Continuous assessment helps teachers and learners to have confidence in what they are doing. Learners' awareness that they are continuously assessed make a difference in their end of the year progress report and intrinsically motivates them to do their best consistently throughout the year (Nxumalo, 2007).

2.6.4 Providing opportunities to all learners to show what they know

In addition, each learner has different qualities. By using different assessment techniques, all leaners are provided with opportunities to show what they know, understand and can do (Chilora et al., 2003). In so doing, the teacher understands all learners better.

2.6.5 Leading to overall evaluation

Moreover, CA provides information of particular levels of skills, understanding and knowledge rather than achievement of certain grades or scores (Chilora et al., 2003). Thus, learners are evaluated as a whole.

Susuwele-Banda states that "properly managed classroom assessment is likely to empower learners to monitor and assess their learning, can guide both teaching and learning and can facilitate good working relationship between the teacher and the learners" (2005, p.128). However, this could only be possible if the assessments conform to the expected standards. The next section, discusses studies that have conducted on the number of CA teachers administer to learners.

2.7 Number of continuous assessment administered to learners

Literature argues that continuous assessment is a daily process (Nitko & Brookhart, 2007). Since teachers are expected to assess learners' performance everyday, it implies that teachers administer as many CAs as possible. However, different teachers teach under different situations which affect their practice.

Studies have shown that teachers fail to assess learners as required due to several challenges. In South Africa, Lumadi (2013) investigated challenges besetting teachers in classroom assessment. The study revealed that time constraints in terms of administering and completing records, huge paper work, lack of knowledge of various assessment methods and problems with policy interpretation were the major challenges. In spite of these challenges, the study does not establish how many CA teachers manage to administer in a school term or year. This information could be of importance when determining the level of support teachers give to learners.

MACRO (2008) conducted an educational assessment in Malawi. The assessment involved consultations with Ministry of Education Science and Technology officials at the headquarters in Malawi, USAID, education officials, teachers, students, and School Management Committee/Parent-Teacher Association (SMC/PTA) members in Rumphi, Dowa, Mchinji Mangochi, and Phalombe districts. Thus, only five districts were involved and Karonga was not among them.

During the assessment activity, MACRO (2008) found that the requirement to make regular (daily or weekly) assessments of each learner's performance at the same time teaching was regarded as the major problem of CA among teachers. It was observed that some teachers conducted CA more expeditiously or less frequently and in the manner they saw fit. This suggests that teachers did not conduct continuous assessment regularly. This is against what continuous assessment entails. The study also found that teachers had difficulties understanding what constitutes valid and reliable observations of

learning. Moreover, it was noted that many teachers criticised PCAR for forcing them to handwrite the large numbers of evaluation criteria in their register books. Furthermore, in spite of the orientation on PCAR, it was noted that nearly all teachers rated the five day orientation as inadequate and sometimes inconsistent between districts. Orientations were aimed at equipping teachers with knowledge and skills to implement the new curriculum which contains continuous assessment. Thus, teachers lack competence to carryout continuous assessment activities in schools which is a vital component of policy implementation. While MACRO (2008) highlights that teachers did not assess learners daily, the study did not establish the exact number of continuous assessment teachers gave their learners. Neither did it establish the relationship between performance on CA and performance on SA.

Still in Malawi, Chulu & Chiziwa (2010) conducted a Primary Curriculum and Assessment Reform Mid-term review (PCAR Mid-Review) in 38 primary schools in 19 administrative districts in Malawi. The study aimed at assessing the implementation of the NPC in which CA is embedded. Thus, the study did not only focus on CA but a broader aspect of the curriculum implementation. The review however, revealed that 71% of the teachers in infant classes recorded less than four CA grades into their performance record books for the whole of the last term of the 2009 academic year. During the study, it was also reported that some teachers just filled the records without conducting CA. This raises doubts if teachers really administered CA to obtain the four CA grades recorded in the performance books. This calls for further investigation to focus on the actual CAs given to establish the number of CA given per term.

While attempts have been made to establish the number of continuous assessment given to learners, the exact number of continuous assessments teachers give learners in a term is yet to be established. This requires further study. The next section discusses the studies on types of CA tasks administered to learners.

2.8 Types of continuous assessment tasks administered to learners

In Uganda, a study on continuous assessment and students' performance in 'A' level secondary schools in Masaka district revealed that numerous CA strategies such as written tests, recap exercises, take home assignments, checklists, observations, presentations and projects were being used (Mwebaza, 2010). However, it was found that teacher made tests were the most used strategy. Although, Mwebaza (2010) reports the use of several CA strategies, the results may not apply directly to primary schools since the study was done in 'A' level secondary schools. Moreover, the study is silent on the relationship between performance on CA and performance on summative assessment. A study focusing on primary schools could be appropriate.

In Tanzania, a study by Mpapalika (2013) on science teachers' practices and challenges in continuous assessment revealed that most continuous assessment activities science teachers frequently gave learners were paper and pencil oriented (e.g. tests) which emphasised measuring low cognitive abilities. The study also found that CA was faced by many challenges such as inadequate knowledge base on CA, unavailability of teaching and learning resources, heavy workloads and inadequate support from the school administrators. In addition, the teachers believed that CA was time consuming in terms of

preparing and marking the tests, homework, projects and practical work. Although the study came up with some types of CAs used by teachers, the study targeted science secondary school teachers; hence, primary school teachers were left out. In addition, continuous assessment practices in others subjects were not investigated. This creates a gap in literature. An investigation on continuous assessment practices in primary schools is therefore deemed necessary to fill the existing gap.

In Nigeria, Akuhanna et al. (n.d.) carried out a study on CA in primary and secondary school: issues and problems. The study concluded that what teachers were doing was continuous testing of learners in the cognitive which is not CA. The studies highlighted that some teachers did not possess the required competences for the implementation of CA. Also, large classes posed a challenge. In addition, time constraint was identified as a problem. It was observed that the three, 45 minute periods were not adequate to provide room for both teaching and CA. While the results from this study could apply to primary schools in Malawi, the study did not find out other continuous assessments techniques that were used apart from tests. The study assumes that only tests were used. Therefore, it is necessary to find out what types of CAs are given to learners.

Still in Nigeria, a study on CA practices of primary and junior secondary school teachers was conducted by Obioma (n.d). The survey sought information from teachers on their understanding of CA and appropriate application of the CA instruments. The study revealed that teachers demonstrated poor knowledge of the elementary concepts of CA. Many teachers misapplied the CA instruments leading to more of continuous testing

instead of CA. The study also identified that there was lack of induction training and refresher courses for teachers on CA, lack of regular supervision of schools on the conduct of CA by school inspectors among others. Like Akuhanna et al. (n.d.), Obioma (n.d.) did not find out types continuous assessment tasks that were used. This creates a gap in literature which needs to be filled.

In addition, Hayford (2007), in Ghana, conducted a research on continuous assessment and lower attaining learners in primary and junior secondary schools. The study found that teachers used the same approach to assess all learners including low attaining learners which caused the learners to perform poorly and eventually repeat classes. Teachers attributed the barriers to supporting lower attaining learners to policy which placed more importance on the SA, large classes and lack of training. On the other hand, the study found that learners became anxious, frustrated and helpless before and during class tests and upset when they failed. Learners reported that difficult tasks, lack of self-reported learning skills and supportive environment were barriers to participating in class tests. While the study found that teachers used the same approach to assess all learners including low attaining learners, it does not specifically spell out if other CA techniques were used beside tests. The knowledge about the use of others CA techniques could help to deduce the level of teachers' understanding of CA. A study therefore is needed to cover this gap.

In Malawi, Susuwele-Banda (2005) conducted a research in two primary schools and studied six teachers on CA. The study investigated teachers' perspectives and practices of

classroom assessment in Mathematics. The findings from the study revealed that within the two schools studied, assessment mainly referred to tests and examinations. Teachers used limited methods and tools to assess their learners. The teachers' perceptions of classroom assessment influenced their classroom assessment practices. Also, teachers contradicted themselves on what they said they were doing and what they were actually doing. It was also revealed that teachers with higher academic qualification were more flexible in trying out new ideas. The study concluded that the evidence gathered from the study suggested that teachers' performance in the classroom is a combination of many factors. While this study gives a deeper insight into continuous assessment practices in primary schools in Malawi, the study still fail short to describe the current CA practices in Malawi. To begin with, the study was done in Mathematics only. Since there are nine subjects in primary school curriculum, the study fails to give an insight into the CA practices in other subjects. In addition, the study was done before CA was adopted and embedded into the NPC in 2007. Thus, the situation described by the researcher in this study, refers to teachers assessment practices before they were introduced to the concept of CA. Since, during the implementation of CA, teachers were trained; it is assumed that their knowledge, skills and capacity to carry out CA has improved. Thus, a new study could be necessary to investigate the current CA practices.

From the studies done globally as well as locally, it is evident that the types of CA given to learners in primary school have not been adequately investigated. Most studies targeted secondary schools and investigated whether teachers use CA or not without extensively identifying the specific types of CA tasks used. Thus, little is known about

the type of CAs teachers give learners in primary schools. This call for further investigation to find out types of CA tasks administered to learners. The next section discusses studies carried out on relationship between CA and learners' performance on SA.

2.9 Relationship between continuous assessment and learners' performance

In a study on continuous assessment and students' performance in 'A' level secondary schools in Masaka district in Uganda, Mwebaza (2010) established that there is a positive relationship between CA strategies used and student performance in 'A' level schools. It was observed that through frequent use of CA, teachers realised the best ways of delivering their subject content so that students could easily learn and understand. Students attributed their success to exposure to various questioning techniques through CA. It was also revealed that teacher made tests were the most used strategy. Some strategies were not used because teachers thought they were time consuming. Due to emphasis on the performance on national examinations, teachers always taught to complete the syllabus and therefore anything beyond that was deemed useless. The limited time in schools did not allow the use of diverse CA strategies. Therefore, teachers opted for strategies that would work within the limited time frame.

The positive relationship established in the study is in line with the concept of uncovering the curriculum in continuous assessment model in which teachers teach for understanding. However, the observation made by students that the exposure to various questioning techniques through CA attributed to their success suggests that teachers gave

students CAs that were examination oriented. This is confirmed by the extensive use of teacher made tests. But, continuous testing is not continuous assessment. Therefore, it is difficult to definitely conclude if the positive relationship was due to continuous assessment or mere memorisation of facts that were likely to come during examinations. In addition, the study does not attempt to establish the strength of relationship. Last but most importantly, the study was done in 'A' level secondary schools which have different characteristics from those of primary schools. The results may therefore not directly apply to primary schools.

Similarly, in a study on the role of continuous assessment in primary school in South Africa, Nxumalo (2007) found that CA has positive effects on education. For example, the study revealed that CA enhances learners' self-esteem, motivates learners to work hard throughout the year and helps learners identify their strengths and weakness. However, the study also revealed that CA overburdens teachers with extra work, is time consuming, needs a lot of materials and is not easy to implement in large classes and rural areas. The study concluded that teachers need to be adequately qualified for the successful implementation of CA in primary school. The study identified three skills that teachers need to successfully implement CA which included (1) identification of outcomes to be assessed, (2) ability to ensure that learners are clear about assessment criteria and (3) use of multiple ways of exposing learners to learning opportunities. Thus, the study concluded that effective CA requires teachers to become lifelong learners through properly planned CPDs. Even though, the study established a positive effect of CA on education, Nxumalo (2007) does not state the number of CAs administered to

learners to give such a relationship. In addition, the study did not establish the strength of relationship. Thus, more information is needed to understand CA better.

Kapambwe (2010) also conducted a research on the implementation of school based CA in Zambia. The study concluded that CA has an important role to play in the development of successful learning; however, due to the past influences of the traditions of objective based assessment, teachers found it difficult to suddenly change to outcome based assessment which uses CA. From both the quantitative and formative evaluation, the findings showed a positive role of formative assessment in improving learning. The study identified some challenges in the implementation of CA such as large classes, staffing (more than one class per teacher) and the provision of remedial and enrichment. Teachers were concerned that the time spent on remediation and enrichment was excessive. Like Mwebaza (2010) and Nxumalo (2007), Kapambwe (2010) does not also establish the extent to which continuous assessment improves learning. In addition, the study does not also specify the number and type of continuous assessments teachers must give learners to develop learning. Another study would be necessary to investigate the number, type of continuous assessment tasks and the strength of relationship that exist between CA and learners' performance on SA.

In Malawi, Mchazime (2003) reports that a feasibility study on continuous assessment was conducted in Ntcheu district in 2002. Twenty one schools were involved. Teachers, headteachers, and members of the school management committees were trained on various CA practices. At the end of the year, the results from the study revealed (1)

improved pupil-teacher relations, (2) improved pupil achievement and (3) increased teacher confidence. Teachers attributed the success of the feasibility study to four factors which included the incremental professional training that teachers received at regular intervals, regular field support, community involvement and team spirit created by the feasibility study. However, the study identified two main challenges. Firstly, the large classes in primary schools which rendered CA time consuming. In addition, there was need to train teachers how to construct their own assessment items. But, during the feasibility study, an ideal situation was deliberately created where different stakeholders worked together to provide support to teachers and the school management committee members which is not the case in normal primary schools situation. Thus, the results from the study may only apply to all primary schools in Malawi if similar conditions are replicated which is currently not the case. Therefore, another study would be vital to investigate the actual number and type of continuous assessments given to learners and the relationship that exist in real Malawian school setting

Last but not least, Chulu and Chiziwa (2010) reports that from a Primary Curriculum and Assessment Reform Mid-term review carried out in 38 primary schools in 19 administrative districts in Malawi, it was found that CA helped teachers identify slow learners and assist them accordingly. In addition, assessment records assisted teachers to keep track of the learners' progress. This is a positive effect of CA on learning. However, it was evident that incorrect CA information was passed on to teachers during orientation due to lack of expertise of the trainers. Hence, the majority of the teachers (99%) and PEAs (99%) reported that continuous assessment issues were not adequately covered and

there were still grey areas that required clarification. Thus, with limited knowledge and skills, it is not known what and how much effect this could have on learners' performance. It is therefore necessary to investigate the relationship between CA conducted by inadequately trained teachers and learners' performance on summative assessment.

Although a number of studies have investigated the relationship between continuous assessment and learners' performance, little or no attempt has been made to establish the strength of the relationship in primary schools.

2.10 Chapter summary

From the available literature, it is evident that continuous assessment is an important tool for supporting learning in schools. Several studies have been conducted on challenges, strategies and role of continuous assessment in teaching and learning. However, most of the studies focused on secondary school teachers or a few subjects. Little has been done on the actual number of continuous assessment teachers give learners, types of continuous assessment tasks and strength of relationship that exist between performance on continuous assessment and performance on summative assessment in primary schools. Hence, there is need to investigate more to fill the gap.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Chapter overview

This chapter reports the research methodology used in the study. The chapter describes the research paradigm, research design, population of interest, sampling, data collection instruments, data collection, data analysis, ethical consideration and lastly limitations to the study.

3.1 Research paradigm

The study employed the quantitative research approach and was guided by the postpositivist worldview. Postpositivism holds that knowledge develops through careful observation and measurement of the objective reality that exist out there in the world (Creswell, 2003). Postpositivism best suited this study because it was believed that reality about the actual continuous assessment practices and the value they add to teaching and learning could be established from the teachers who are implementing the CA policy and the records they keep. It was believed that the use of numerical measures of observations and studying the behaviour of teachers through document review would adequately help answer the research questions (Creswell, 2003) and justify the research hypothesis.

3.2 Research design

This study used a descriptive survey research design utilizing quantitative methods of data collection. Descriptive studies are concerned with the conditions or relationships that exist, opinions held, processes that are going on, effects that are evident or trends that are developing (Best & Kahn, 2003). Surveys gather data at a particular point in time with the intention of describing the nature of the existing conditions or identifying standards against which existing conditions can be compared or determining the relationship that exists between specific events. Surveys are well-known instruments used to gather a lot of information within a short period at low cost from a large population (Best & Kahn, 2003; Cohen et al., 2007; Creswell, 2003). This design was the most desirable because the study sought to describe the actual teachers' continuous assessment practices and the relationship between learners' performance on CA and performance on SA in primary schools.

3.3 Population of interest

The study targeted all qualified primary school teachers and primary school learners in Nongwa (pseudonym) education zone in Karonga district in Malawi. Nongwa zone was chosen because of the diversity of schools in terms of enrolment and location. The zone has schools with very high enrolment and others with very low enrolment. In addition, some schools are located in an urban setting while others are in a semi urban setting and others in a typical rural setting. It was therefore believed that this could give a comprehensive picture of continuous assessment practices and the relationship between performance on CA and performance on SA.

3.4 Sampling

Multistage sampling was used to select participants to the study. Multistage sampling involves selecting the sample in stages that eventually lead to taking sample from sample (Cohen et al., 2007). Although this method was not as good as simple random sampling when considering the generalizability of findings, some limitations compelled the researcher to use it. Inability to readily access a complete list of the teachers and learners and widely scattered geographical distribution of schools (Cohen et al., 2007; Best & Kahn, 2003) prevented the researcher from using simple random sampling.

3.4.1 Choice of schools

Simple random sampling was used to select participant schools. There were 20 schools in the zone. Two of them were junior primary schools and two were inaccessible; hence, they were not included in the selection. The names of the 16 schools were arranged alphabetically in ascending order. Numbers were assigned to the schools. Then, the =RANDBETWEEN (1, 16) function of Microsoft Excel was run to generate random numbers between 1 and 16. One number was generated each time the function was run until seven schools were selected to ensure that the sample was representative of the population and to reduce the sampling error. This represented 35% of the schools. Cohen et al., (2007) notes that as the sample size increases the sampling error decreases. Random sampling was used to provide all schools with equal chances of being selected (Best & Kahn, 2003) which in turn provides the ability to generalize to a population (Creswell, 2009).

3.4.2 Choice of teachers and headteachers

Seven headteachers and 33 standard six and seven class-teachers from each of the sampled schools were purposively sampled to participate in the study. There were 336 qualified teachers in the zone, 137 males and 199 females. Thus, 11% of the teachers (15% males and 7% females) were sampled. Purposive sampling is a technique in which a researcher handpicks the cases to be included in the sample based on the researcher's judgment that they possess particular characteristics the study is looking for (Cohen et al., 2007; Best & Kahn, 2003). The headteachers were chosen because by virtue of their position they are the supervisors in the schools. Headteachers monitor the performance of teachers. They periodically check the teachers records both teaching and assessment records. Hence, headteachers hold more information on teachers' continuous assessment practices for the whole school. The standard six and seven class teachers were chosen because in these classes SA is well established as it is mainly prepared centrally at the zone. Class teachers were chosen because they are implementers of the assessment policy and custodians of class records including continuous assessment records. In Malawi, all primary school teachers are general teachers. They do not specialise in any subject or level of primary education. They are trained to teach all the subjects in all classes. Hence, they teach all the subjects in the curriculum. Moreover, standard six and seven are in the middle of the senior section of primary school (standard five to eight); hence, they are free from national examination (MANEB) pressure in standard eight and the effects of transition from junior primary where the medium of communication is the common local language (Ministry of Education, 2009).

3.4.3 Choice of learners

In addition, 330 learners were selected from the seven schools. At each school, ten learners from each class (standard six and seven) were selected using simple random sampling. The learners were selected to supply their portfolios. The contents from the portfolios were used to generate data pertaining to all the three questions in the study. Where there was more than one stream per class, each stream was treated independently. All the continuous assessment tasks for English, Mathematics and Expressive Arts in the portfolios were counted, analysed to establish the types of CA used and the knowledge dimension assessed to generate data for question one and two. The continuous assessment scores as well as the end of term one (2015/2016 session) scores were collected onto the score collection form to be used to answer question three.

Class registers were used to select learners. The total number of learners in the register was divided by ten. The first ten multiples of the answer (quotient) were computed to identify the positions of the ten selected learners whose scores for both CA and SA in Mathematics, English and Expressive Arts were collected from their portfolios. Registers were used because the contained names of all learners already written in alphabetical order by sex. Simple random sampling was used to provide all learners with equal chances of being selected (Best & Kahn, 2003).

3.4.4 Choice of subjects

Three subjects, English, Mathematics and Expressive Arts, were purposively selected to represent the three subject families in primary schools. There are nine subjects in the

NPC in Malawi. All the subjects are core subjects (Ministry of Education, 2009). Thus, they are equally assessed. English and Chichewa belong to the literacy and languages family, Mathematics, Agriculture and Science and Technology belong to the science family while Expressive Arts, Social and Environmental Sciences, Life Skills, Bible Knowledge and Religious Studies belong to the social studies and expressive arts family. In order to achieve a representation of all subjects, the study utilised one subject from each family. Thus, the study used English, Mathematics and Expressive Arts to capture a comprehensive picture of continuous assessment practices across the curriculum.

3.5 Instrumentation

Two data generation methods were used, questionnaire and document analysis. From these, four data generation tools were prepared and used to generate data from the participants and documents. These included the teachers' questionnaire, headteachers' questionnaire, document review guide and score collection form.

3.5.1 Questionnaires

Two closed questionnaires were used to generate data from teachers and headteachers (see appendix 2 and 3). Best & Kahn (2003) states that a questionnaire is used when factual information is desired and an opinionnaire is used when opinions are desired. However, Best & Kahn (2003) further explain that the two purposes can be combined into one form that is referred to as a questionnaire. In this study, the questionnaire served both purposes. McMillan & Schumacher (1997) identify three reasons for using questionnaires in research as follows: (1) They are economical in relation to both time

and money. (2) They can easily be administered to a larger sample of participants. (3) They allow sufficient time for the participants to scrutinize their responses. Thus, the researcher used the two questionnaires to generate data from a large sample within a short period of time and at low cost.

Both the teachers' and headteachers' questionnaires had five sections. Section one had eight items soliciting biographic data. Participants provided personal details by ticking (√) against the appropriate option (see appendix 2, section 1.0 and appendix 3, section 1.0). Section two had five items which requested the respondents to indicate classroom continuous assessment practices by ticking (√) against the option that best described their experiences (see appendix 2, section 2.0 and appendix 3, section 2.0). Section three and four consisted of 12 items on continuous assessment practices and 15 items on assessment techniques respectively pertaining to questions one and two. Respondents were asked to rate each item on a 4 point likert scale ranging from always to never by ticking (√) in the appropriate column (see appendix 2, sections 3.0 and 4.0 and appendix 3, sections 3.0 and 4.0). Section five consisted of nine items on a 5-point likert scale soliciting participant opinions on the effects of CA on learners' performance on SA relating to question three. Respondents were asked to rate the opinions from strongly agree to strongly disagree by ticking (√) in the appropriate column (see appendix 2, section 5.0 and appendix 3, section 5.0).

3.5.2 Document analysis

In order to maximise the benefit from document analysis, two data generation tools, document review guide and scores collection form, were used to generate data from the assessment tasks (CA and SA) found in the learners' portfolios for term one of 2015/2016 school year. Document analysis was appropriate because portfolios contained the actual continuous and summative assessment tasks and scores obtained by the learner on each task thereby describing the prevailing assessment practices (Best & Kahn, 2003) within the schools.

Firstly, the document review guide contained guidelines to be followed when analysing the continuous assessment tasks in the learners' portfolios to determine whether the tasks assessed learners' ability in the cognitive, affective or psychomotor domain and the level of bloom's taxonomy to which the tasks belonged (see appendix 4). The guide also contained 15 assessment techniques in section three against which the researcher marked with a tick (√) to indicate evidence when the use of the technique was observed in the documents. This helped to track the frequency of different assessment techniques used in the schools. Thus, the document review guide helped to generate data relating to questions one and two.

Secondly, the score collection form was designed to contain CA and SA scores for each learner sampled (see appendix 5). CA and SA scores in Mathematics, English and Expressive Arts from term 1 of 2015/2016 academic year were collected from the

learners' portfolios. The scores were used to investigate the relationship between learners' performance on CA and performance on SA in response to questions three.

3.6 Validity and reliability

In order to ascertain the validity of instruments, expert opinion was sought from the supervisors and peers on face, content and construct validity of the questionnaires, document review guide and score collection form. Consultations with the supervisors and peers helped to identify errors and offered the opportunity to modify and improve the instruments. Items 1.8 and 1.9 were added to the teachers' and headteachers, questionnaires after consultations.

Also to ascertain the validity and reliability of the research instruments, a pilot study was conducted in one school within the same education zone that did not participate in the actual study. Responses were analysed and participants were asked to comment on the quality of questions, content and the overall designs of the instruments. Following this study, more errors were identified in the instruments. Some participants complained that the font size was small. As a result the font size was increased to 14 points. One item was removed from section five of both the teachers' and headteachers' questionnaire. Drawing on the expert opinions from the supervisors, headteachers, teachers and peers, appropriate corrections were made on the instruments. Thereafter, all instruments were administered by the researcher.

3.7 Data generation

Different types of data were generated from teachers, headteachers and learners' portfolios using the four data generation tools described above. The researcher administered the questionnaires and analysed the tasks in the learners' portfolios himself. This gave the researcher an opportunity to establish rapport, explain the purpose of the study, and attend to participants' concerns (Best & Kahn, 2003). This helped to increase the response rate. Out of 34 teachers' questionnaires distributed, 33 questionnaires were returned while all the seven headteachers questionnaires distributed were returned representing a 97% and 100% response rate respectively. In addition, the researcher managed to get access to learners' portfolios for all the sampled learners.

3.8 Data analysis

Data analysis involves preparing the data for analysis, conducting different analyses, moving deeper and deeper into understanding the data, representing the data, and making an interpretation of the larger meaning of the data (Creswell, 2009). To achieve this, data was analysed in frequencies, mean, range and correlations using Microsoft Excel and statistical package for social sciences (SPSS) and is presented in graphs and tables. Both descriptive and inferential statistics were investigated.

Before analysis was done, the data was entered into the SPSS programme, screened and cleaned to check for errors while entering. Negatively worded items were reversed before scoring (Pallant, 2011). For example, items 5.2, 5.3, 5.7, 5.8 and 5.9 were reversed. In addition, items that described the same variable that was investigated were added and

recoded into new variables. For example, 3.1, 3.2 and 3.6; 3.3, 3.5 and 3.7; 5.1, 5.2, 5.3 and 5.7 and 4.2, 4.5, 4.6, 4.7, 4.10, 4.14 and 4.15 were added to determine the cognitive domain, affective domain, the association between performance on CA and performance on SA and paper and pencil respectively. Items 3.1, 3.4, 3.8, 3.9, 3.10, 3.11 and 3.12 were recoded into psychomotor domain, knowledge, comprehension, application, analysis, synthesis and evaluation respectively. Both descriptive and inferential statistics were used to analyse data as shown in table 3.1 below:

Table 3.1: Data analysis plan

Question	**Source of data**	**Type of analysis**
How many continuous assessments do teachers give learners per school term?	Questionnaires • Teachers/Headteachers	Frequencies (percentages)
	Document analysis guide • Learners' portfolios	Frequencies (percentages) Range and mode
What type of continuous assessment tasks do teachers give learners?	Questionnaires • Teachers/Headteachers	Frequencies (percentages)
	Document analysis guide • Learners' portfolios	Frequencies (percentages)
What association exists between performance on continuous assessment and performance on summative assessment?	Questionnaires • Teachers/Headteachers	Frequencies (percentages)
	Score collection form • Scores from learners' portfolios	Pearson product correlation

3.8.1 Descriptive statistics

Descriptive statistics such as frequencies (percentages), range and mode were used to analyse the data and results are presented in tables and graphs.

3.8.2 Inferential statistics

Pearson product moment correlations (r) were investigated to describe relationships between performance on CA and performance on SA at the end of the term. Correlation is a statistical method used to determine whether a relationship between variables exists (Best & Kahn, 2003; Bluman, 2007). In this study, performance on CA was the independent variable while performance on SA (end of term test) was the dependent variable. Correlation coefficient ranges from +1 to -1 indicating a strong positive relationship and strong negative relationship respectively. A correlation of zero (0) indicates no relationship at all (Bluman, 2007; Pallant, 2011). Correlation coefficients of 0.717, 0.717 and 0.775 were found for the relationships between performance on CA and performance on SA in Mathematics, English and Expressive Arts respectively.

Coefficients of determination (r^2) were calculated to determine the percentage of learners' performance on SA (dependent variable) that could be explained by learners' performance on CA (independent variable). Coefficient of determinations (r^2) of 51%, 51% and 60% were calculated for the relationships in Mathematics, English and Expressive Arts respectively. Coefficient of determination is found by squaring the correlation coefficient and multiplying the answer by 100 to change to percentage (Best & Kahn, 2003; Kubiszyn & Borich, 2003; Bluman, 2007; Pallant, 2011).

Before investigating the relationships, the researcher performed preliminary analysis to ensure that there were no violations of the assumptions of normality, linearity and

homoscedasticity. All the relationships did not violet any of the assumptions (see appendix 6).

3.8.3 Statistical significance

Statistical significance indicates how much confidence should be there in the results obtained (Pallant, 2011; Best & Kahn, 2003; Bluman, 2007). Sometimes chance might appear to be evidence of a genuine relationship. A coefficient of correlation is accepted as satisfactorily significant on probability basis only when chance or sampling error has been discredited (Best & Kahn, 2003). Statistical significance was used to reject the null hypothesis (H_0) (Pallant, 2011, Best & Kahn, 2003; Bluman, 2007) which states that there is no relationship between learners' performance on CA and performance on SA. One test of statistical significance of r is determined by the following formula:-

$$t_r = \frac{r\sqrt{N-2}}{\sqrt{1-r^2}}$$

Where:

t_r = t value

$N - 2$ = degree of freedom

r = correlation of coefficient

r^2 = the square of correlation coefficient

The statistical significance is determined by comparing the t_r value and the critical value of r obtained from the distribution table. If the t_r value is equal to or greater than the critical value of r, the correlation coefficient is accepted as significant and the null hypothesis (H_0) is rejected indicating that the relationship between performance on CA

and performance on SA is not a result of sampling error or chance. If the t_r value is less than the critical value, then the test fails to reject the null hypothesis (H_0) (Best & Kahn, 2003; Pallant, 2011; Bluman, 2007). The traditional significance level at which the null hypothesis can be rejected is $p < .05$ (Pallant, 2011).

In this study, the statistical significances of all correlation coefficients were tested. The t_r values of 18.572, 18.543 and 21.937 and critical values of 2.576, 2.576 and 2.576 were calculated for the relationships in Mathematics, English and Expressive Arts respectively. All the t_r values were greater than the critical values of the correlations of the relationship between performance on CA and performance on SA in Mathematics, English and Expressive Arts at significant level of 0.05.

3.9 Ethical consideration

Ethics refers to a matter of principled sensitivity to the rights of others (Canan, 1977 as cited in Cohen et al., 2007). While truth is the desirable good, respect of human dignity must be upheld all the time (Cohen et al., 2007). With regard to this assertion, the researcher sought access to schools and assured the participants that the principles of confidentiality and anonymity were going to be taken seriously.

3.9.1 Access negotiation

The researcher first submitted the introductory letter from the college (see appendix 1) to the District Education Manager (DEM), Karonga, and explained the purpose of the study. With permission from the DEM, the researcher introduced himself to the PEA of Nongwa

zone and described the purpose of the study. The researcher also introduced himself to the prospective participants through their headteachers and briefed them on the purpose of the study and obtained their consent. This was done to gain acceptance (Cohen et al., 2007).

3.9.2 Confidentiality

The participants were also assured that the information collected was going to be used for the purpose of the research only. They were assured that no part of the information given was going to be given to any third party and that the questionnaires completed were going to be destroyed soon after the research report is submitted and finally accepted. To demonstrate this principle, all the completed questionnaires were directly handed to the researcher. Similarly, the researcher personally analysed the tasks in the portfolios. This was done to minimise information linkages.

3.9.3 Anonymity

Throughout the research process, the researcher ensured that information provided by participants did not in any way reveal their identity (Cohen et al., 2007). In view of this, the questionnaires did not request for participant name. In addition, the participants were assured that pseudonyms were going to be used to refer to participants, schools or the zone in order to protect their identity.

3.10 Limitations to the study

The study faced some problems that could have negatively affected the results. Some problems were expected while others were not. Some of the foreseen problems included: lack of consistency in teachers' responses and generalizability of results. Some of the unforeseen problems were absenteeism of participants, lack of systematic record keeping and disproportional representation of male and female teachers in the sample.

3.10.1 Lack of consistency in teachers' responses

There were inconsistencies in responses among teachers from the same school, teaching the same class but different streams. For example, teachers reported different number of CAs administered in a term. However, this was overcome by the use of multiple methods which helped the researcher to compare data generated through the different methods, questionnaires and document analysis. By counting the number of CAs in the learners' portfolios for the first term of 2015/2016 academic year, data was generated which was compared to the data provided by teachers through questionnaires.

3.10.2 Generalizability of results

The use of multistage sampling and purposive sampling compromised the power of simple random sampling to generalise the results. Best & Kahn (2003) emphasizes that when data are derived from a group without careful sampling procedures, the researcher should carefully state that findings apply only to the group observed and may not apply to or describe other individuals or groups. However, purposive sampling ensured that rich data was generated to describe the existing CA practices in schools. Headteachers

coordinate and monitor all school activities; hence, they are more familiar with all the school activities including continuous assessment. Likewise, class teachers are custodians of class records including continuous assessment records. Thus, the use of purposive sampling complimented simple random sampling.

3.10.3 Absenteeism of participants

Some teachers were repeatedly absent from duties due to various reasons such that it took time before the researcher obtained consent from them. This delayed data generation. In order to deal with this problem, the researcher rescheduled the appointments with the concerned participants through their headteachers.

3.10.4 Lack of systematic record keeping

In most schools, the headteacher's office as well as the classrooms did not have enough space and fixtures such as shelves and cupboards to keep the learners' portfolios systematically and readily accessible. Teachers heaped the portfolios in the headteacher's office where it was difficult to retrieve the portfolios of the selected learners. Sometimes, learners kept their portfolios making them inaccessible within short notice. To overcome the problem, the researcher arranged with the teachers a day before the actual day of review to give them more time to retrieve the portfolios.

3.10.5 Disproportional representation of male and female teachers in the sample

Despite the high proportion of female teachers in the zone as well as in the sampled schools, the proportion of female teachers in the sample was low. This made the sample

not to achieve proportional representation of the population. However, this did not affect the results since gender was not one of the variables investigated in the study.

3.11 Chapter summary

This chapter has discussed the methodology used in the study. Participants were selected using multistage sampling. Two data generation methods were used, questionnaire and document analysis. Out of these, four different data generation tools (teachers' questionnaire, headteachers' questionnaire, document review guide and score collection form) were used to generate data of different types to answer the research questions. Both descriptive and inferential statistics were investigated. Results are presented in the next chapter.

CHAPTER FOUR

RESULTS AND DISCUSSION OF FINDINGS

4.0 Chapter overview

This chapter provides details of the findings from the study. However, before presenting the actual results of the study, a general description of the teachers', headteachers' and school characteristics is presented in order to put in context the discussions of the major findings. The results from all the instruments are presented concurrently according to the order of the research questions.

4.1 Characteristics of teachers and headteachers

In order to understand the role of continuous assessment practices better, a summary of teachers' and headteachers' characteristics in terms of sex, education qualifications, training programme, length of teaching experience, class enrolment and school staffing and enrolment is presented first. Teacher's performance in the classroom is a result of a combination of many factors (Susuwele-Banda, 2005) such as the ones listed above. Thus, understanding these factors may lead to a better understanding of the research findings.

4.1.1 Sex

Out of 33 teachers who participated in the study, 20 (61%) were males and 13 (39%) were females. On the other hand, all the seven headteachers (100%) were males. Figure 4.1 gives a summary of the sex of participants.

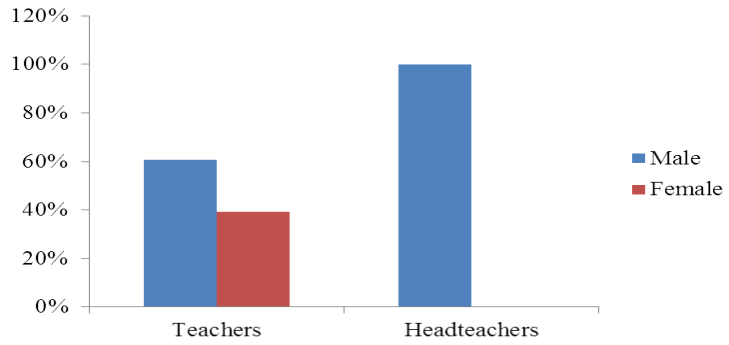

Figure 4.1: Sex of participants

While the majority of teachers in the zone were females (199 out of 336) as well as in the selected schools, none of the headteachers in the selected schools was a female. One may wonder whether this was by chance or design. However, the findings correspond with the cultural views about gender that ascribe leadership roles to males and subordinate roles to females (Malawi Institute of Education, 2008).

4.1.2 Education qualifications

From the questionnaires completed, the study found that 23 teachers (69%) from the sample had Malawi School Certificate of Education (MSCE). On the other hand, all (100%) headteachers sampled had MSCE. MSCE is awarded to students after successfully completing senior secondary education (form three and four). Table 4.1 summaries the education qualifications of teachers and headteachers.

Table 4.1: Education qualifications of teachers and headteachers by gender

Qualification	Teachers (N = 33)				Headteachers (N = 7)			
	Male		Female		Male		Female	
	N	%	N	%	N	%	N	%
JCE	6	18	2	6	-	-	-	-
MSCE	12	36	11	33	7	100	-	-
Diploma	1	3	-	-	-	-	-	-
Not specified	1	3	-	-	-	-	-	-
Total	20	61	13	39	7	100	-	-

The details from the table above suggest that most teachers (69%) in Nongwa zone had the highest academic qualification required to teach in primary schools in Malawi. Studies have found that teachers' academic qualification influence teacher's flexibility to accept new ideas (Susuwele-Banda, 2005). It could be speculated therefore that teachers in Nongwa zone had a positive perception of CA; hence, they practiced it in their classes. Currently, MSCE is the required education qualification necessary for admission into primary school Teacher Training Colleges (TTC) (Ministry of Education, Science and Technology, 2015). Primary school teachers undergo two year training at TTCs which consist of theory in the first year and practicum in the second year. A primary school teaching certificate is awarded after successful completion. However, some teachers who graduated from TTCs sometime ago were admitted to colleges with a minimum academic qualification of Junior Certificate of Education (JCE). JCE is awarded to students after successfully completing junior secondary education (form one and two).

4.1.3 Training programmes

The biographical data collected show that teachers in Nongwa zone were trained through different programmes. Table 4.2 shows details of training programmes.

Table 4.2: Training programmes

	Teachers		Headteachers	
Programme	N	%	N	%
2 year	6	18	7	100
1 year	3	9	-	-
MASTEP	1	3	-	-
MIITEP	13	39	-	-
IPTE Conventional	7	21	-	-
IPTE ODL	2	6	-	-
Others	1	3	-	-
Total	33	100	7	100

The results indicate that 39% of the teachers were trained through MIITEP while only one teacher was trained through MASTEP. The table also shows that all (100%) headteachers were trained through a two-year programme. A two year teacher education programme was used in Malawi until 1993. MASTEP was used concurrently with the two year programme from 1990 to 1993. Thereafter, MIITEP was used up to 2005. Currently, IPTE Conventional and IPTE-ODL are concurrently used. The researcher wonders why only teachers qualified through two year programme were headteachers in the schools. Experience shows that all teachers are taught leadership and education administrative skills while in college. This accords all qualified teachers a chance to become headteachers. Drawing headteachers from all training programmes could enrich management of schools. In this respect, teachers who went through recent teacher

training programmes (IPTE) which were based on the NPC which promotes CA are capable of spearheading a paradigm shift in assessment.

4.1.4 Teaching experience

The information from questionnaires administered indicates that 24% (8) of the teachers sampled had working experience of less than 10 years, 39% (13) had teaching experience of 10 to 17 years and the rest (37%) had teaching experience of at least 18 years. Those with less than 10 years of teaching experience were trained through either IPTE-Conventional or IPTE-ODL. Teachers with 10 to 17 years' experience were trained through MIITEP. The first MIITEP cohort graduated in 1999 (Kunje, Lewin & Stuart, 2003; MANEB, 1999) while the first groups of IPTE-Convention and IPTE-ODL graduated in 2007 (MANEB, 2007) and 2009 (MANEB, 2009) respectively. This indicates that the majority of teachers in Nongwa zone had worked for more than 10 years. This was a considerable period of experience to put into practice what they learnt in college and identify what works or not. However, this may not necessarily mean that teachers with less than 10 years of experience were less competent since they learnt in college about continuous assessment. Earlier studies in Malawi (Susuwele-Banda, 2005) found that teacher experience and teacher education program did not contribute much to teachers' perceptions of classroom assessment. Thus, all teachers were equally expected to implement the CA policy.

4.1.5 Class enrolment

The mean class enrolment was 94, minimum was 30, maximum was 235 and range was 205. Most of the teachers (82%) taught classes which had more than the recommended pupil – teacher ratio of 1 to 60 in Malawian primary schools (Sedere, 2005). Figure 4.2 below gives a summary of the class enrolment.

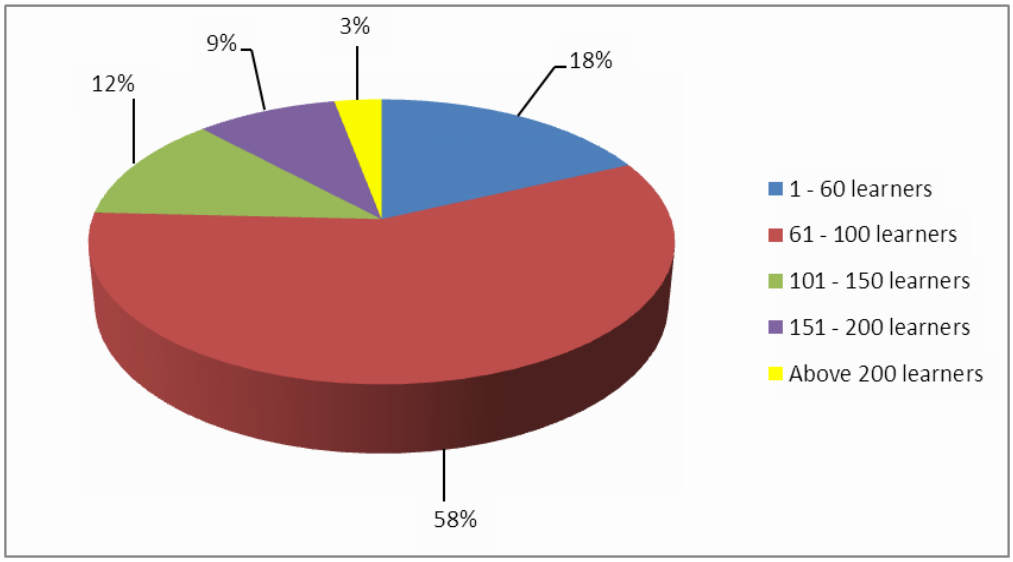

Figure 4.2: Class enrolment

The results suggest that most teachers had more learners to assess than recommended. This translated to more workload in terms of planning, teaching, assessing, marking and record keeping. It is common in Malawi for one teacher to teach a class of more than 100 learners. Similarly, in Tanzania, Mpapalika (2013) found that heavy workload among teachers was one of the major challenges to continuous assessment. In such situations how do teachers cope? It seems difficult for a teacher to administer six CAs using a variety of techniques in each subject per term as recommended by the policy. Then, how

do teachers assess learners? Under such circumstances, it is uncertain if CA adds the expected value to teaching and learning.

4.1.6 School staffing and enrolment

Most of the sampled schools had fewer teachers to meet the recommended pupil – teacher ratio of 1 to 60. A summary of the details is given in table 4.3 below.

Table 4.3: School staffing and enrolment

School	School 1	School 2	School 3	School 4	School 5	School 6	School 7	Total
Teachers	30	12	27	14	10	8	43	144
Enrolment	2,488	745	2,055	655	661	-	3,424	10,028
PTR	83	62	76	47	66	-	80	70

The maximum school enrolment was 3,424 and the minimum was 655 giving a range of 2769. On the other hand, the minimum pupil – teacher ratio (PTR) was 47 and the maximum was 83. Thus, in the seven schools, the range of PTR was 36. This shows that there were variations in the ratio of teachers to learners. Thus, teachers from some schools had more learners in their classes than others. This suggests that teachers in some schools have more workload compared to teachers from other schools. Yet, the policy expects all teachers to assess learners in the same way. The problem could be even worse if a teacher teaches more than one class. In Malawi, teachers are deployed to schools first based on the school PTR. The number of classes matters less. However, teacher supply is a great challenge in most schools but more especially in rural areas (Mulkeen, 2005).

4.2 Continuous assessments administered in a term

The findings from the teacher's questionnaires indicate that teachers administered less than the recommended minimum of six CAs per term. The results indicate that 16 out of 32 (50%) teachers who responded to the question administered 2 to 3 CAs in a term. Only 5 out of 32 (15%) administered 6 or more CAs per term and 4 out of 32 (13%) administered less than 2 CAs per term. Figure 4.3 below summaries the number of CAs administered by teachers in a term.

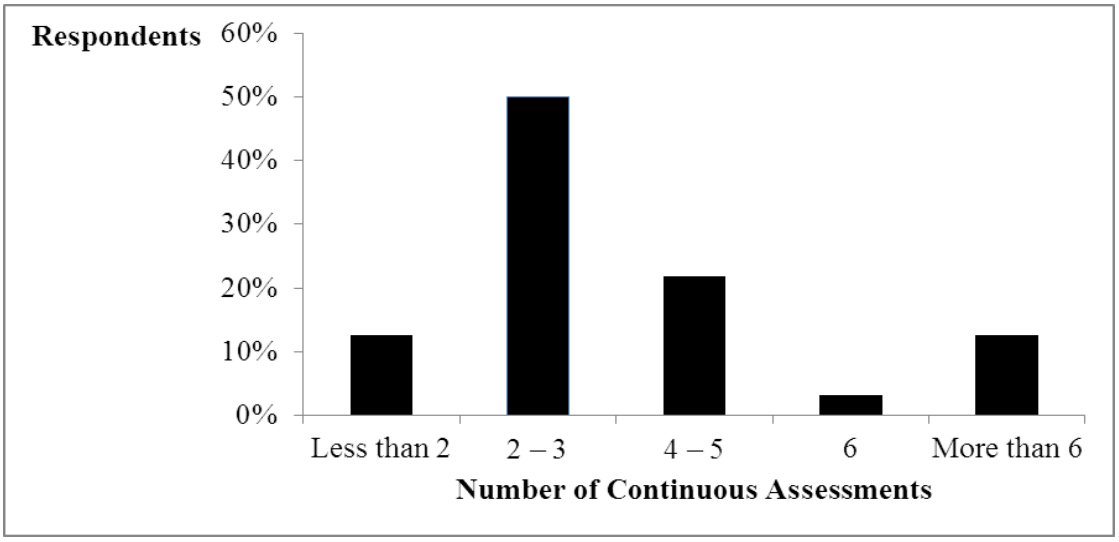

Figure 4.3: Number of continuous assessments per term (N = 32)

The results show that half of the teachers (50%) administered 2 – 3 CAs per term. This suggests that teachers do not adequately assess learners. This could be partly due to the high pupil-teacher ratio in the two classes as indicated earlier on. The failure to keep pace with the policy requirements may also be due to time constraint, large classes, lack of competence (Lumadi, 2007; Akuhanna et al., n.d.; Mpapalika, 2013). This confirms

earlier findings by MACRO (2008) that the requirement to make regular (daily or weekly) assessments of each learner's performance at the same time teaching is regarded as the major problem of CA among teachers in Malawi. Similarly, in a study of continuous assessment in primary and secondary schools in Nigeria, Akuhanna et al. (n.d.) found that three 45 minutes periods were not sufficient to provide room for both teaching and continuous assessment.

Findings from the questionnaire administered to headteachers show similar results to those of teachers. More than half (57%) of the seven headteachers reported that teachers gave 2 -3 CAs per term. None of the headteachers reported that teachers gave less than two CAs per term while 43% reported that teachers gave more than 3 CAs per term. This shows an agreement between teachers and headteachers in the sampled schools. Thus, headteachers also confirmed that the requirement to make regular (daily or weekly) assessments of each learner's performance is the major problem of CA among teachers (MACRO, 2008).

Findings from the analysis of CA tasks in the leaners' portfolios show that in most schools, teachers administered 2 CAs per term; however, some variations existed among subjects. Teachers administered more CAs in English and Mathematics than in Expressive Arts. Figure 4.4 below summarises the results.

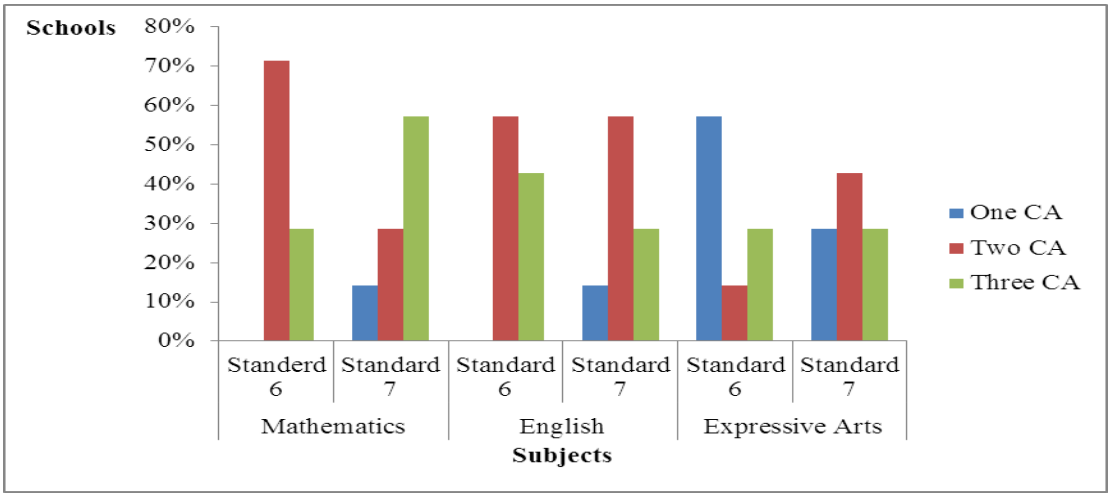

Figure 4.4: Continuous assessments in a term per class per subject (N = 7)

In standard 6, all teachers administered at least two CAs per term in Mathematics and English. Approximately 70% and 60% of the schools administered 2 CAs per term in Mathematics and English respectively. However, almost 60% of the schools administered one CA per term in Expressive Arts in standard six.

The variation based on subjects shows the importance teachers attach to the subjects. Mathematics is regarded as a difficult subject by most students (Dayal, 2013); hence, teachers feel that learners require more practice. On the other hand, Expressive Arts is regarded as simple. Likewise, one of the factors used to determine time allocation to learning areas and subjects during PCAR was the importance of improving learners' performance level in literacy and numeracy. Mathematics and English were allocated 8, 35 minute, periods each while Expressive Arts was allocated 5, 35 minute, periods in standard 6 and 7 (Ministry of Education, 2009). This also reflects the importance attached to Mathematics and English.

In summary, all the findings show that teachers did not meet the recommended minimum number of CAs to be given to learners per term in standards six and seven. The maximum number of CA observed per term is three, the range is two and the mode is two. This confirms the findings from earlier studies that teachers have problems assessing learners every fortnight as required (Chulu & Chiziwa, 2010; MACRO, 2008). This could be a result of teachers perceptions that CA is time consuming (Mchazime, 2003; Lumadi, 2007) lack of support from school administrators (Mpapalika, 2013) and lack of regular supervision by school inspectors (Primary Education Advisors) (Obioma, n.d.). This is in contrast with the demands of the continuous assessment model which emphasises that teachers conduct assessment activities regularly to provide timely support to all learners (Chilora et. al., 2003). Thus, learners are deprived opportunities to learn with understanding and succeed. The next section discusses the types of CA tasks given to learners.

4.3 Types of continuous assessment tasks

This section presents the findings of the study by discussing the types of continuous assessments tasks that were given to learners in standard six and seven in the sampled schools. The section discusses the perceptions of respondents on the characteristics of CA according to the learning domains, levels of critical thinking according to the Bloom's taxonomy and the assessment techniques used by the teachers.

4.3.1 Assessing learners ability according to the learning domains

The questionnaires for both teachers and headteachers solicited respondents' experiences in assessing learners' ability in the learning domains.

4.3.1.1 Learning domains assessed by teachers

Seven characteristics of the learning domains were given to the participants to rate them according to the CA practices used. Responses to characteristics belonging to each learning domain were added and recoded. Items 3.1, 3.2 and 3.6 were recoded to cognitive domain, 3.3, 3.5 and 3.7 were recoded to affective domain while 3.4 was recoded to psychomotor domain (see appendix 2, section 3). The items were recoded to group items belonging to the same domain under one variable. The results were reconverted to the original scale of 1 to 4. Figure 4.5 below summarises the results.

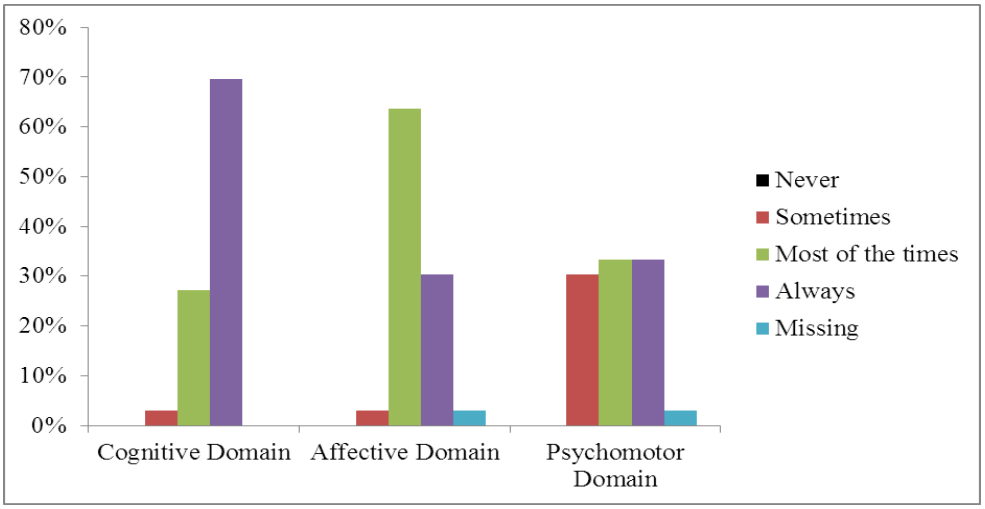

Figure 4.5: Learning domains assessed by teachers (N = 33)

The findings show that the majority of teachers (70%) reported that they always gave learners continuous assessment tasks that assessed the cognnitive abilities. Cognitive domain focuses on knowledge and abilities requiring memory, thinking and reasoning processes (Nitko & Brookhart, 2007). None of the teachers (0%) reported that they never assessed learners in each of the domains.

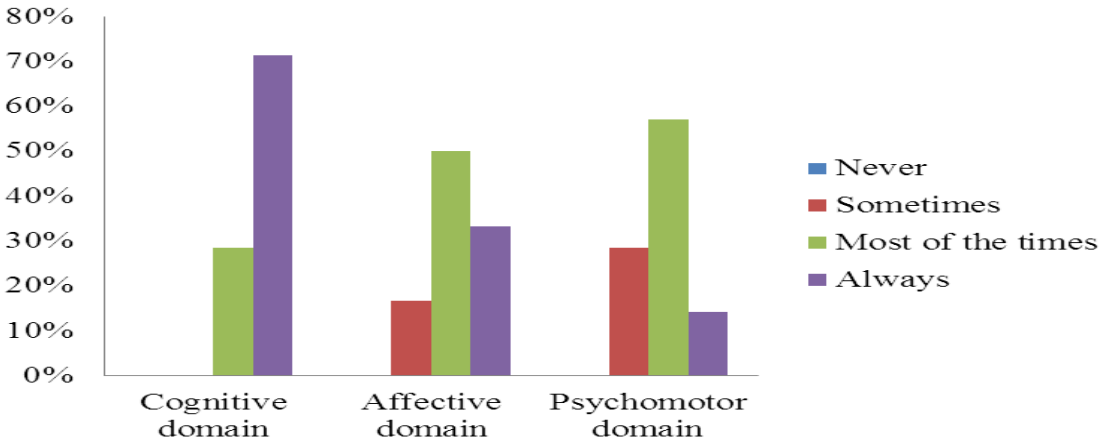

Figure 4.6: Learning domains reported by headteachers (N=7)

4.3.1.2 Learning domains reported by headteachers

A similar questionnaire was given to headteachers with seven characteristics of the learning domains. Headteachers rated the characteristics according to their knowledge of continuous assessment practices used by teachers in their schools. Responses for 3.1, 3.2 and 3.6 were added and recoded to cognitive domain. Responses for 3.3, 3.5 and 3.7 were also added and recoded to affective domain while the response for 3.4 was recoded to psychomotor domain (see appendix 3, section 3). The items were also recoded to group items belonging to the same domain under one variable. The results were converted back to the original scale of 1 to 4. Figure 4.6 below summarises the results.

The findings indicate that most headteachers (71%) reported that teachers always gave learners assessment tasks that assessed the cognitive domain. None of the headteachers (0%) reported that teachers never assessed learners in each of the domains. The findings from the teachers and headteachers confirm each other.

In relation to this, the findings from the review of CA tasks contained in the learners' portfolios indicated that all the 91 CA tasks (100%) that were reviewed assessed learners in the cognitive domain. This confirms the findings from the teachers' and headteachers' questionnaires. Akuhanna et al. (n.d.) also found that teachers in Nigeria continuously tested learners in the cognitive domains. Cognitive domain focuses on knowledge and abilities requiring memory, thinking and reasoning processes (Nitko & Brookhart, 2007). The findings therefore show that teachers did not provide all learners with opportunities to show what they know and can do (Chilora et al., 2003). Moreover, the findings fail to support the definition of CA as a mechanism whereby the final grading of learners systematically takes into account all their performances during a given period of schooling in the cognitive, affective and psychomotor domains of learning (Falayalo, 1986 as cited in Adaramaja (n.d.). Thus, learners' skills in the affective and psychomotor domains were not assessed; hence, learners who possessed more skills in these domains than in cognitive were inadequately assessed. Studies have shown that when learners are not assessed according their abilities, they feel anxious, frustrated and helpless and consequently fail in school (Hayford, 2007). This could lead to learners repeating classes and eventually dropping out of school which is a common scenario in Malawi. Development Research Group (2004) reports that out of more than 95% of Malawian

children who start school in standard one, only about 60% complete standard six. This is an indication that learners are not supported in schools which is one of the roles of continuous assessment.

4.3.2 Assessment of levels of critical thinking

Six items were given to teachers and headteachers to rate based on their experiences. Items 3.4, 3.8, 3.9, 3.10, 3.11 and 3.12 were recoded to knowledge, comprehension, application, analysis, synthesis and evaluation respectively (see appendix 2, section 3 and appendix 3, section 3). The items were recoded to give them familiar variable names than the characteristics which were used in the questionnaire.

From the questionnaires, most teachers (70%) gave learners CA tasks at knowledge level of the Bloom's Taxonomy all the time. Not more than 45% of the teachers gave learners CA tasks that assessed other levels of critical thinking. Figure 4.7 gives a summary of the findings of teachers' perspectives.

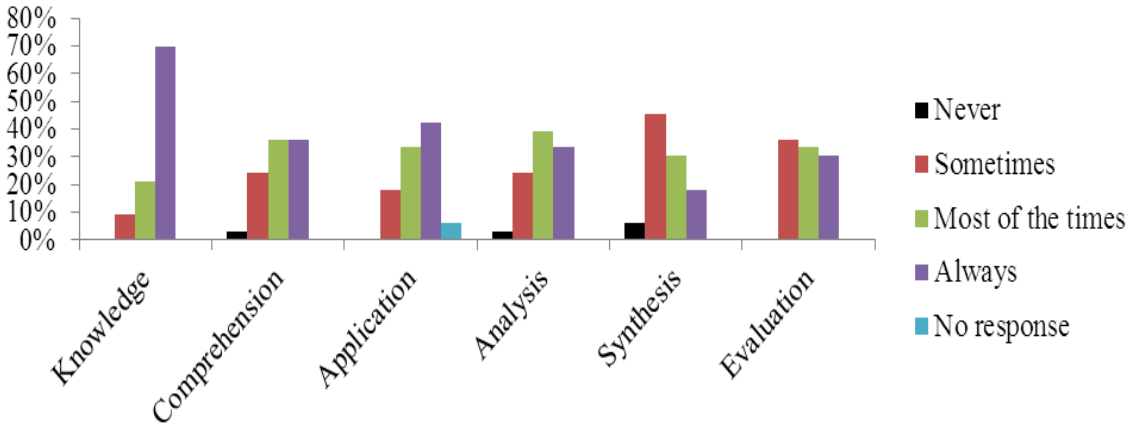

Figure 4.7: Continuous assessment and the Bloom's Taxonomy reported by teachers (N=33)

Similarly, 71% (five out of seven) of the headteachers reported that teachers always gave CA tasks that assessed learners' knowledge and comprehension levels of critical thinking. Not more than 43% (three out of seven) of the headteachers reported that teachers assessed learners in other levels.

Results from the review of CA tasks contained in the learners' portfolios show that out of the 91 CA tasks reviewed, 89 (98%) and 82 (90%) had components that measured learners ability in knowledge and comprehension respectively. Table 4.4 below summarises the results.

Table 4.4: Continuous assessment and Bloom's Taxonomy: Document review (N=91)

Knowledge		Comprehension		Application		Analysis		Synthesis		Evaluation	
N	%	N	%	N	%	N	%	N	%	N	%
89	98	82	90	35	38	28	31	18	20	-	-

The results therefore suggest that most teachers in Nongwa zone assessed learners in the lower levels of cognitive domain as indicated by high percentages of CA tasks at knowledge and thereby decreasing at each level to the lowest (0%) at evaluation. Knowledge is the simplest and most common level where as evaluation is the most complex and least common level of cognitive domain (Kubiszyn & Borich, 2003). This confirms earlier findings that most continuous assessment activities given by teachers emphasise assessment in lower cognitive abilities (Mpapalika, 2013). In this circumstance, the researcher wonders if teachers had the skills to choose and use assessment techniques that assess learners' performance at all levels of the blooms taxonomy. The next section discusses the assessment techniques used by teachers.

4.3.3 Assessment techniques

Fifteen assessment techniques were given to teachers and headteachers to rate them according to their experiences. Items 4.2, 4.5, 4.7, 4.10, 4.14 and 4.15 (see appendix 2, section 4 and appendix 3, section 4) were added and recoded to paper and pencil. To provide a better understanding, the results from teachers' questionnaire, headteachers' questionnaire and document review are presented separately before summarising them.

4.3.3.1 Assessment techniques used by teachers

Out of the 33 teachers who participated in the study, the majority (79%) reported that they used oral assessment all the time while 64% used observation. However, 76% of the teachers used paper and pencil most of the time. On the other hand, 12% of the teachers reported that they never used portfolios. Figure 4.8 below summarises the findings.

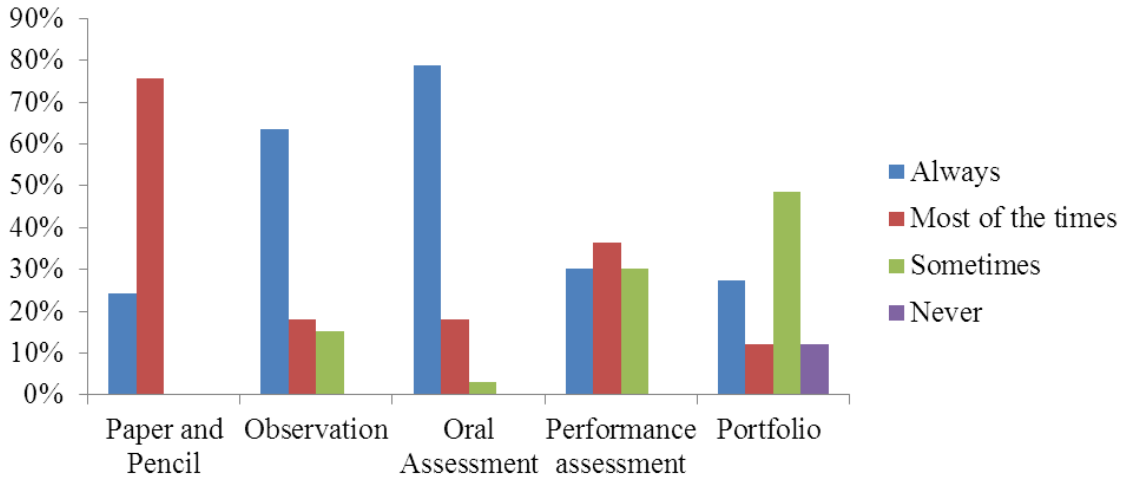

Figure 4.8: Assessment techniques used by teachers (N=33)

From the summary, teachers reported that they used all the assessment techniques except four (12%) teachers who never used portfolios as assessment technique. However, some techniques were used more than others. More than 20 teachers (61%) used observation and oral assessment techniques all the time. In addition, 25 (76%) teachers used paper and pencil tests most of the times. The use of all assessment techniques is in line with the concept of 'assessment activities' in the continuous assessment model which states that a variety of assessment techniques should be used to speak to the different learning styles of learners. It is argued that one format of assessment provides an incomplete picture of what the learner has learnt (Nitko & Brookhart, 2007).

4.3.3.2 Assessment techniques reported by headteachers

The results from the headteachers' questionnaires indicate that at least five headteachers out of seven (71%) reported that teachers in their schools used observation and oral assessment all the time while four (57%) headteachers reported that teachers used paper and pencil most of the times. Only one (14%) headteacher reported that teachers used performance assessment and portfolios when assessing their learners. Figure 4.9 below summaries the results.

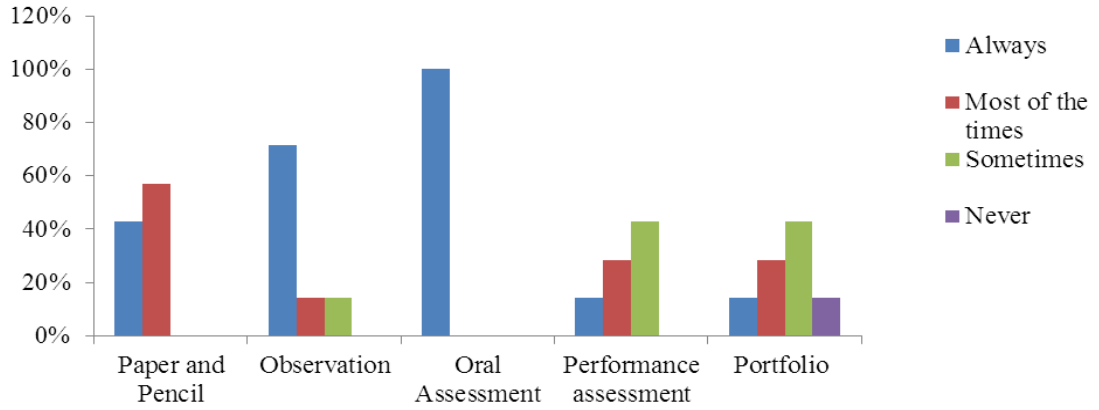

Figure 4.9: Assessment techniques reported by headteachers (N=7)

Both teachers and headteachers reported that all the assessment techniques were used by the teachers but at different degrees. This suggests that teachers understand that one format of assessment provide an incomplete picture of what the learner has learnt (Nitko & Brookhart, 2007). The findings from teachers' and headteachers' questionnaires also show that observation and oral assessment were used all the time by teachers when assessing learners. This suggests that teachers underscore the use of different assessment strategies both formal and informal to find out what a learner knows, understands and can do (Chilora et al., 2003; Du Plessis et al., 2003). However, both sources also indicate that portfolios and performance assessment were the least used assessment techniques.

4.3.3.3 Assessment techniques identified through document review

The results from the analysis of 91 CA tasks from the learners' portfolios indicated that all (100%) the assessment activities were paper and pencil dominated by tests. In addition, all (100%) the assessment tasks were kept in the learners' portfolios. However, there was no evidence indicating use of observation, oral assessment, and performance assessment.

The findings from document review show a departure from the findings from teachers and headteachers. While teachers and headteachers reported that at least all the assessment techniques were used at different degrees, findings from document review indicate that some assessment techniques were not used at all. The assessment techniques which teachers and headteachers reported that they were always used were not the same which were identified from document review. This suggests a contradiction between what teachers and headteachers reported that they were doing and what they were actually doing. This confirms the earlier findings that teachers contradicted themselves on what they said they did and what they actually were doing (Susuwele-Banda, 2005). However, this might be a result of lack of knowledge of CA practices. It was observed earlier under training programmes that 69% of the teachers sampled were not trained in continuous assessment practices while in college. Lumadi (2013) and Akuhanna et al. (n.d.) also found that teachers in South Africa and Nigeria respectively were not aware of the various CA methods.

4.3.3.4 Use of paper and pencil tests

The majority (100%) of assessment tasks reviewed from learners portfolios were paper and pencil oriented dominated by tests. This shows failure on the part of teachers to adopt continuous assessment practices in learners' assessment. Similar results were found in Tanzania where most science activities given to learners were paper and pencil oriented (Mpapalika, 2013)

In addition, the emphasis on tests, suggests that teachers misunderstood continuous assessment for continuous testing. Several researchers have found similar results before. In a study in Malawi by Susuwele-Banda, findings indicated that within the two schools under study, assessment mainly referred to tests and examinations (Susuwele-Banda, 2005). In addition, in two studies in Nigeria, findings indicated that what teachers were doing was continuous testing (Akuhanna et al., n.d.; Obioma, n.d.). However, the teachers' practices could be a result of the influence of the assessment traditions used in the earlier curricula which emphasised on external examinations (Chirwa & Naidoo, 2014). In Zambia, Kapambwe (2010) also found that due to past experiences of objective based assessment teachers were finding it difficult to quickly change to outcome based education which emphasises CA. Since in Malawi, external examinations are still the only technique used to evaluate learners' performance for the award of a Primary School Leaving Certificate at the end of the eighth year of the primary school cycle, teachers find themselves in a dilemma to adopt CA or not.

However, in most classrooms, the range of learners' ability varies from slow to average to fast learners. Thus, by mostly using paper and pencil technique to assess the learners, teachers fail to respond to the needs of individual learners more especially those of low ability. In Ghana, Hayford (2007) found that teachers used the same approach (testing) to assess all learners including low ability learners which caused the learners to perform poorly and even to repeat the classes.

4.3.3.5 Use of portfolios

All the teachers in all the schools sampled kept portfolios for learners. All the 330 learners had portfolios. All the 91 tasks (100%) were found in the portfolios. All the scores collected were directly taken from the scripts kept in the portfolios. However, there was no evidence that teachers used the portfolios for assessment. None of the portfolios could be classified into any of the five types identified by Butter & McMunn (2006). Portfolios were therefore used as a storage facility which contained evidence of work done (Ministry of Education, Science and Technology, 2010) not as a purposeful, integrated collection of learner's work showing effort, progress or degree of proficiency (Butter & McMunn, 2006). This suggests that teachers misapplied portfolios as storage facility instead of assessment technique. This could be a result of inadequate knowledge on how to use portfolios as continuous assessment technique. Similar results were found by Chulu & Chiziwa (2010) during the PCAR - mid-term review.

In a nutshell, the findings on the use of types of continuous assessments techniques indicate that teachers give learners assessment tasks that are paper and pencil oriented

with emphasis on testing. The findings also show that most teachers assessed learners' abilities in the lower part of the cognitive domain. In addition, there was a mismatch between what teachers and headteachers reported that they were doing and what was actually observed through the review of CA tasks in learners' portfolios. This confirms the findings of a study in Nigeria that what teachers do is continuous testing of learners in the lower cognitive which is not continuous assessment (Akuhanna et al., n.d.). The next section discusses the association between performance on CA and performance on SA.

4.4 Association between performance on CA and performance on SA

The participants were asked to rate nine items on a 5 point likert-type scale on whether performance on CA determines performance on SA from strongly agree to strongly disagree. The negatively worded items were reversed. Results for items 5.1, 5.2, 5.3 and 5.7 (see appendix 2, section 5.0 and appendix 3, section 5.0) were added and recoded into a new variable indicating aggregate perception of relationship between performance on CA and performance of SA. The responses for strongly agree and agree were collapsed to agree. Similarly, responses for strongly disagree and disagree were collapsed to disagree. The findings for both teachers and headteachers perceptions are summarised in table 4.5.

Table 4.5: Association between performance on CA and performance on SA

Perception	Teachers		Headteachers	
	N	%	N	%
Disagree	2	7.4	-	-
Not Certain	6	22.2	3	50.0
Agree	19	70.4	3	50.0
Total	27	100.0	6	100.0

4.4.1 Teachers' and headteachers' perceptions

Most of the teachers (70.4%) and half of the headteachers (50%) agreed that performance on CA determines performance on SA. However, 29.6% of the teachers and 50% of the headteachers were either not sure or totally disagreed. This suggests that the majority of teachers agree that performance on CA determines performance on SA.

4.4.2 Teachers' perceptions according to years of experience

A comparison of perceptions among teachers of varying teaching experiences shows that there are differences among teachers with different teaching experience. Figure 4.10 below provides a summary of the findings.

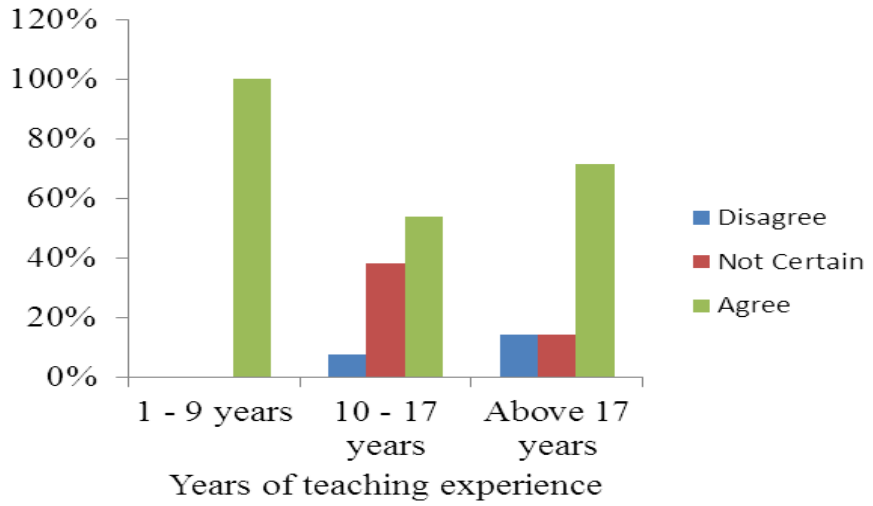

Figure 4.10: Teachers' perceptions according to years of experience (N=27)

All teachers (100%) with not more than 9 years of teaching experience agreed that performance on CA determines performance on SA. On the other hand, teachers who had served for more than 9 years differed on their perceptions. Interestingly, teachers who had served for not more than 9 years were those who were trained through either IPTE-Conventional or IPTE –ODL as earlier discussed under teaching experiences of teachers and headteachers. This suggests that teachers who were trained based on the NPC which emphasises on CA have a better understanding of positive effects of CA. On the other hand, teachers who were not trained based on the new curriculum have difficulties understanding and appreciating the role of CA on learners' performance. Studies in Nigeria (Obioma, n.d.) found that teachers demonstrate poor understanding of continuous assessment due to inadequate induction training and refresher courses on continuous assessment. This is in line with the earlier evidence that during PCAR orientation nearly all teachers rated the five day orientation as inadequate (MACRO, 2008). This confirms

what other scholars recommended that teachers need to be adequately qualified for the successful implementation of CA in primary schools (Nxumalo, 2007).

4.4.3 Statistical association between mean of CA scores and SA scores

The relationships between mean of CA scores and performance on SA in Mathematics, English and Expressive Arts were investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure that there were no violation of the assumptions of normality, linearity and homoscedasticity (see Appendix 6). The results are summarised in table 4.6 below.

Table 4.6: Association between mean of CA scores and SA scores

		Mean Mathematics CA score	Mean of English CA scores	Mean of Expressive Arts CA scores
SA Mathematics	R	0.717		
SA English	R		0.717	
SA Expressive Arts	R			0.775
	N	328	327	322
Coefficient of determination (r^2)		51%	51%	60%
Degree of freedom (*df*)		326	325	320
t value of r (t_r)		18.572	18.543	21.937
Critical Value :at $\alpha = .01$		2.576	2.576	2.576

There were strong, positive correlations between the two variables, r = 0.717, n= 328; r = 0.717, n = 327 and r = 0.775, n = 322 in Mathematics, English and Expressive Arts respectively. A positive correlation indicates that as one variable increases, so does the

other (Pallant, 2011; Bluman, 2007). Thus, learners with high scores on CA also had high scores on SA and vice versa (Kubiszyn & Borich, 2003; Pallant, 2011; Bluman, 2007). According to Pallant, a relationship of a correlation coefficient of ranging from 0.5 to 1.0 is regarded as strong (2011). While a strong relationship is admirable, it may not necessarily mean causation but presence of complex interrelationships among many variables (Brain, 2008). Studies in Malawi have shown that learners' performance in primary schools is affected by a number of factors such as age, sex, socio-economic background and parents' education background of the learner (Kunje, Selemean-Meke & Ogawa, 2009).

Coefficients of determination were also calculated to find out how much variance was shared by the two variables in each correlation. All the coefficients of determination were above 50% indicating strong relationships. Thus, the variations in the mean of CA scores (independent variable) could explain more than 50% of the variations in SA scores (dependent variable) in each case. Pallant describes a coefficient of determination of 34% as a respectable amount of variance explained when compared with a lot of research conducted in social sciences (2011). Tests for statistical significance were also calculated. All the t_r values, 18.572, 18.543 and 21.937, were bigger than the critical values, 2.576, 2.576 and 2.576, at significant level of $\alpha = 0.01$ and the degree of freedom of 326, 325 and 320 in Mathematics, English and Expressive Arts respectively. This suggests that 99% of the times the results obtained were not due to error in sampling and the null hypothesis (H_0) that there is no relationship between performance on CA and

performance on SA was rejected in each case (Best and Kahn, 2003; Pallant, 2011; Bluman, 2007).

In a nutshell, the findings show that there is a positive relationship between performance on CA and performance on SA. This is in line with findings by other scholars. In South Africa, Nxumalo (2007) found that CA had positive effects on education. Mchazime (2003) reports that the results of the feasibility study on CA which was conducted in Ntcheu district in Malawi revealed (1) improved pupil-teacher relations, (2) improved pupil achievement and (3) increased teacher confidence. This is in line with the concept of 'uncovering the curriculum' in the continuous assessment model which emphasises that teachers should not only aim at completing the curriculum but also ensuring that learners understand the content.

4.5 Chapter summary

From the discussions, there is evidence that teachers carry out CA in primary schools; however, they do not assess learners every fortnight (six CAs in a term) as required by the policy. Teachers used paper and pencil tests to assess learners in the lower levels of the cognitive domain. Other methods were either rarely or not used at all. Although, there was a mismatch between what teachers said they do and what was observed from the CA tasks reviewed from the learners portfolios. However, from the few CAs administered, there is evidence that performance on CA is positively correlated to performance on SA.

CHAPTER FIVE

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

5.0 Chapter overview

Continuous assessment is a way to ensure that all learners have opportunities to succeed in school. In most classrooms, the range of learners' ability varies from slow to average to fast learners. By using CA, teachers can adapt their instructions to the needs of all the learners so that all of them have the chance to learn and succeed. By continually observing the learners to see what they know and can do, teachers promptly support learners in their studies (Chilora et al., 2003; Du Plessis et al., 2003).

The current study sought to investigate the continuous assessment practices that are actually taking place in primary schools under PCAR and the value they add to teaching and learning. The study has contributed to the body of knowledge on continuous assessment practices by responding to the following questions: How many continuous assessments do teachers give learners per school term? What type of continuous assessment tasks do teachers give learners? What association exists between performance on continuous assessment and performance on summative assessment? The chapter summarises the conclusions, implications and recommendations to practice, policy and further research drawn from the findings.

5.1 Conclusions and implications

The study has come up with a number of conclusions. These conclusions are discussed in this section alongside their implications according to the research questions.

5.1.1 Number of continuous assessment given to learners

The study has found that teachers find it difficult to meet the minimum recommended number of CAs to be given to learners in a term. All teachers gave less than four CAs per term which was below the recommended minimum of six CAs per term. This means that learners are not adequately assessed. However, CA is supposed to assist the teacher to adapt his or her instruction to the needs of all the learners so that all of them have the chance to learn and succeed (Chilora et al., 203). If few CAs are given, learners are deprived a chance to benefit from meaningful teaching and learning which could lead to success in school.

The study has also revealed that there are variations in the number of CAs given among subjects. Teachers assessed learners more in Mathematics and English than in Expressive Arts. This shows the importance attached to the subjects; hence, learners benefit more in some subjects than others. Thus, teachers fail to provide the much needed support to learners. Only if adequate CAs could be given to all learners in all subjects, learners will not be assisted to develop as a whole.

5.1.2 Types of continuous assessment tasks given to learners

Teachers continuously gave learners paper and pencil tests assessing the lower levels of the cognitive domain. The study has revealed that all teachers conducted CA in their classes. However, all the tasks mainly assessed the knowledge and comprehension levels of the cognitive domain of learning. There was little evidence of assessing the affective and psychomotor domains of learning. However, it is argued that "the concern for" assessing "the affective domain of learning reflects an awareness by educators that the skilled performance of complex tasks involves more than the ability to recall information, form concepts, generalize, and solve problems" (Kubiszyn & Borich, 2003, p. 157). Learners are therefore deprived a chance to demonstrate their full range of abilities.

The study has also found that teachers contradict themselves on what they say they do and what they actually do. Both teachers and headteachers reported that they assessed learners in the effective and psychomotor domains, the higher levels of the cognitive domain and used almost all the assessment techniques; however, the actual tasks reviewed from the learners' portfolios showed no evidence of the same. This could be a result of a combination of factors such as inadequate knowledge about CA, class sizes and time constraints.

Moreover, the study has revealed that teachers lack skills to use some of the continuous assessment techniques necessary for a holistic approach. Almost 50% of the teachers reported that they used portfolios at times. Similarly, only 14% (1) of the headteachers reported that teachers use portfolios all the time. Thus, lack of skills to use the

assessment techniques made teachers fail to use them. In contradiction, all teachers in all schools kept learners' portfolios even though they did not use them for assessment. Instead, they were used as a storage facility of learners' assessment scripts. This shows that teachers misapply portfolios as a storage facility instead of assessment technique. Also, in spite of the overwhelming accession on the use of oral assessment and observation, there was no evidence of their use which could be in form of checklists. It can therefore be speculated that teachers either did not use them at all or they used them but they did not possess the skills to score and record observations and oral assessments. This calls for professional development through in-service training.

5.1.3 Relationship between performance on CA and performance on SA

The study also found that there is a positive relationship between performance on CA and performance on SA. Teachers and headteachers agreed that performance on CA determines performance on SA. In addition, there was a strong positive correlation (0.70 and above) between mean of CA scores and SA scores. This means that learners with high scores on CA also obtained high scores on SA. However, the presence of a strong relationship does not imply causation but an indication of the existence of complex relationships of many factors one of which could be continuous assessment.

In addition, the study found that the training programme through which teachers were trained has an impact on the teachers' perceptions on the value of CA. All teachers who graduated from IPTE - conventional and IPTE – ODL agreed that performance on CA determines performance on SA. Unsurprisingly, these are teachers who have been trained

based on the NPC that supports CA. This implies that the uncertainty among other teachers is a direct result of influence of the traditional view of objective assessment through which they were trained which was also evident through the extraordinary use of paper and pencil tests as continuous assessment technique. Thus, there is need to organise more sensitisation workshops to enable all teachers embrace the holistic CA approach.

5.2 Recommendations

Recommendations have been made to practice, policy and further research.

5.2.1 Recommendations to practice

- Teachers should keep records of all CA administered to the learners.
- Headteachers should monitor CA activities within their schools to ensure that all teachers are carrying out CA activities as required.
- Headteachers should arrange for school insets where teachers can share information on CA so that teachers with less knowledge and skills benefit from those who have more. (e.g. Teachers who have been trained through IPTE-Conventional and IPTE-ODL should share knowledge with other teachers)

5.2.2 Recommendations to policy

The Ministry of Education, Science and Technology through Education Division Managers and District Education Managers should take note that teachers are finding problems to assess learners regularly as required by the assessment policy.

5.2.3 Recommendations for further research

- A similar research should be carried out on a larger scale such as the whole country to determine the value that the current CA practices add to teaching and learning.
- A comparative study should be carried out to determine if there are differences in the value CA adds in large and small classes.
- Further investigation is required to find out how teachers use portfolios to assess learners in their classes.

5.3 Chapter summary

This chapter has discussed the conclusions and their implications drawn from the findings from the study. In additions, recommendations have been made to practice, policy and further research based on the conclusions. The conclusions from the study have added to the body of knowledge an insight into CA practices that are actually taking place in primary schools in Malawi and the value they add to teaching and learning.

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APPENDICES

Appendix 1: Letter of introduction

CHANCELLOR COLLEGE

Principal: Richard Tambulasi
B.A (Pub Admin), BPA(Hons) MPA, PhD

P. O. Box 280, Zomba, MALAWI
Tel: (265) 01 524 222
Telex: 44742 CHANCOL MI
Fax: (265) 01 524 046
Email: deaned@cc.ac.mw
bchulu@cc.ac.mw

OFFICE OF THE DEAN OF EDUCATION

16th December, 2015

TO WHOM IT MAY CONCERN

Dear Sir/Madam

LETTER OF INTRODUCTION (MASTER OF EDUCATION)

The Faculty of Education would like to introduce to you Mr Alstarico M Mbizi, Registration no. MED/PR/EDF/08/14, Chancellor College M.Ed Student who is supposed to do research in area of his interest.

This letter serves to request you to assist his with data collection in your institution.

The Faculty of Education will appreciate your support in this very important aspect of our students' training.

Yours faithfully,

UNIVERSITY OF MALAWI
CHANCELLOR COLLEGE
2015 -12- 16
DEAN
FACULTY OF EDUCATION

F. Kholowa, (PhD)
DEAN OF EDUCATION

cc: Supervisor

Appendix 2: Teachers' questionnaire

Dear Respondent,

RE: QUESTIONNAIRE: CONTINUOUS ASSESSMENT PRACTICES AND LEARNERS' PERFORMANCE IN PRIMARY SCHOOL

I am a student at the University of Malawi, Chancellor College. Currently, I am engaged in a research project as part of the requirement for my Master of Education Degree. The research is concerned with 'Continuous assessment practices and learners' performance in primary schools and '.

I am pleased to write you as one of the selected participants in order to seek your assistance in acquiring information about your experiences relating to the research.

I would like to assure you that all information given will be regarded as **CONFIDENTIAL**. No part of the information will be given out to any third party. No personal details, school as well as zonal details will be mentioned in the findings nor will any of the results be related to any particular headteacher/teacher/learner/participant, school or zone.

I deeply appreciate your assistance.

Yours sincerely,

A. M. Mbizi

_____

Date

TEACHER'S QUESTIONNAIRE

INSTRUCTIONS TO THE RESPONDENT

1. Please read through each statement carefully before giving your opinion.
2. Please make sure that you do not neglect a question or skip any page.
3. Please be totally frank when giving your opinion. There is no correct or wrong answer but just opinions
4. Please do not discuss statements with any one.
5. Please return the questionnaire after completion directly to the researcher.

1.0 Section One: Personal details

Provide your personal details in 1.1 to 1. 9 by marking the appropriate box with a tick ☐ ✓

1.1 What is your sex? Male: ☐ Female: ☐

1.2 How old are you? 15 – 20 ☐ 21 – 25 ☐ 26 – 30 ☐ 31 – 35 ☐ 36 – 40 ☐

(In years) 41 – 45 ☐ 46 – 50 ☐ 51 – 55 ☐ 56 – 60 ☐ Above 60 ☐

1.3 What is your highest education qualification? DIPLOMA ☐ MSCE ☐ JCE ☐

1.4 Through which programme were you trained as a primary school teacher?

2 year programme: ☐ 1 year programme: ☐ MASTEP ☐ MIITEP: ☐

IPTE Conventional: ☐ IPTE ODL: ☐ Others: ☐ Specify: _____

1.5 When did you graduate from college (TTC)? (Year only _____

1.6 How long have you been teaching at this school? (In years)

Less than 5 years ☐ 5 – 10 ☐ 11 – 15 ☐ 16 – 20 ☐ Above 20 ☐

1.7 What class are you teaching? _____

1.8 How many learners are there in your class? _____

1.9 What is the transition rate for your class? _____

2.0 Section Two: Classroom practices

From 2.1 to 2.5, provide your classroom experiences in relation to assessment. Mark in the box against the statement that best describes your experiences with a tick ✓ .

2.1 How often do you administer continuous assessment in your class per subject? (Choose one only).

Everyday: ☐ Once a week: ☐ Twice a week: ☐ Once in 2 weeks: ☐

Once a term: ☐ Six times a term: ☐ More than six times a term: ☐

Not at all (zero): ☐

2.2 How often do you give your learners a test in each subject? (Choose one only)

Everyday: ☐ Once a week: ☐ Twice a week: ☐ Once in 2 weeks: ☐

Once a term: ☐ Six times a term: ☐ More than six times a term: ☐

Not at all (zero): ☐

2.3 How many continuous assessments activities do you give your learners in a term in each subject?

Less than two (2): ☐ two – three: ☐ Four – Five: ☐

Six: ☐ More than six: ☐

2.4 When do you assess learners in your class?

Everyday: ☐ Every week end: ☐ Every month end ☐

At the end of every topic: ☐ At the end of a term: ☐ In every lesson: ☐

2.5 How many continuous assessments do you give your learners in a month in each subject?

None: ☐ One: ☐ Two: ☐ Three: ☐

Four: ☐ At least five: ☐

3.0 Section Three: Assessment practices

For each of the statements below, rate the frequency of occurrence based on your classroom assessment practices. Choose among the four option; Always, Most of the times, Sometimes and Never. Show your response using a tick [✓] in the column that corresponds with your level of agreement.

I give my learners continuous assessment tasks that require them to:		**Always**	**Most of the times**	**Sometimes**	**Never**
3.1	recall what they have learnt in class				
3.2	think in order to get the required response				
3.3	show their attitude towards what is being learnt				
3.4	demonstrate their motor skills				
3.5	show their feelings in what is happening in real life				
3.6	demonstrate knowledge on what they have learnt				
3.7	show their emotional state				
3.8	use the information learned in class in everyday life				
3.9	show understanding of what has been learned in their own words				
3.10	break down concepts into smaller parts to understand them better				
3.11	build up bigger concepts/ products from smaller ones				
3.12	make judgment on what they have learnt				

4.0 Section Four: Assessment techniques

How often do you use the following assessment techniques in your class?		Always	Most of the times	Sometimes	Never
4.1	Observation				
4.2	Exercises				
4.3	Projects				
4.4	Practical work				
4.5	Assignments				
4.6	Homework				
4.7	Essay questions				
4.8	Peer assessment				
4.9	Oral questions				
4.10	Tests				
4.11	Performance assessment				
4.12	Portfolios				
4.13	Anecdotal records				
4.14	Structured questions				
4.15	Objectives questions (multiple choice, matching items, blank filling, true/false items)				

5.0 Section Five: Effects of continuous assessment

Continuous assessment has the following effects on learner's performance:		Strongly Agree	Agree	Not certain	Disagree	Strongly Disagree
5.1	Learners who perform high on continuous assessment also perform high on end of term tests					
5.2	Learners who perform poorly and those who perform high on continuous assessment have equal opportunity to perform high on end of term tests					
5.3	The performance of learners on continuous assessment does not affect their performance on end of term test					
5.4	Creates confusion among learners about their academic performance					
5.5	Continuous assessment demotivates gifted learners					
5.6	Learners who write more continuous assessment perform high on end of term tests					
5.7	Learner's performance on end of term tests can not be predicted by their performance on continuous assessment					
5.8	The number of continuous assessments administered does not affect the performance of learners during end of term test					
5.9	Learner's performance on end of term tests can not be predicted by number of continuous assessments written during the term					

Appendix 3: Headteachers' questionnaire

Dear Respondent,

RE: QUESTIONNAIRE: CONTINUOUS ASSESSMENT PRACTICES AND LEARNERS' PERFORMANCE IN PRIMARY SCHOOLS

I am a student at the University of Malawi, Chancellor College. Currently, I am engaged in a research project as part of the requirement for my Master of Education Degree. The research is concerned with 'Continuous assessment practices and learners' performance in primary schools'.

I am pleased to write you as one of the selected participants in order to seek your assistance in acquiring information about your experiences relating to the research.

I would like to assure you that all information given will be regarded as **CONFIDENTIAL**. No part of the information will be given out to any third party. No personal details, school as well as zonal details will be mentioned in the findings nor will any of the results be related to any particular headteacher/teacher/learner/participant, school or zone.

I deeply appreciate your assistance.

Yours sincerely,

A. M. Mbizi

_____

Date

HEADTEACHER'S QUESTIONNAIRE

INSTRUCTIONS TO THE RESPONDENT

1. Please read through each statement carefully before giving your opinion.
2. Please make sure that you do not neglect a question or skip any page.
3. Please be totally frank when giving your opinion. There is no correct or wrong answer but just opinions
4. Please do not discuss statements with any one.
5. Please return the questionnaire after completion directly to the researcher.

1.0 Section One: Personal details

Provide your personal details in 1.1 to 1. 9 by marking the appropriate box with a tick ☐✓

1.1 What is your sex? Male: ☐ Female: ☐

1.2 How old are you? 15 – 20 ☐ 21 – 25 ☐ 26 – 30 ☐ 31 – 35 ☐ 36 – 40 ☐

(In years) 41 – 45 ☐ 46 – 50 ☐ 51 – 55 ☐ 56 – 60 ☐ Above 60 ☐

1.3 What is your highest education qualification? DIPLOMA ☐ MSCE ☐ JCE ☐

1.4 Through which programme were you trained as a primary school teacher?

2 year programme: ☐ 1 year Programme: ☐ MASTEP: ☐ MITEP: ☐

IPTE Conventional: ☐ IPTE ODL: ☐ Others: ☐ Specify: _____

1.5 When did you graduate from college (TTC)? (Year only) _____

1.6 How long have you been teaching at this school? (In years)

Less than 5 years ☐ 5 – 10 ☐ 11 – 15 ☐ 16 – 20 ☐ Above 20 ☐

1.7 How many teachers are there at your school? Males ☐ Females ☐

1.8 What is the total enrolment at your school? _____

1.9 What is the average pass rate for your school over the past five years?

2015 ☐ 2014 ☐ 2013 ☐ 2012 ☐ 2011 ☐

2.0 Section Two: Classroom practices

From 2.1 to 2.5, provide your classroom experiences in relation to assessment. Mark in the box against the statement that best describes your experiences with a tick ☐ ✓ .

2.1 How often do teachers administer continuous assessment at your school per subject? (Choose one only).

Everyday: ☐ Once a week ☐ Twice a week ☐ Once in 2 weeks: ☐

Once a term: ☐ Six times a term: ☐ More than six times a term: ☐

Not at all (zero): ☐

2.2 How often do teachers give learners a test in each subject at your school? (Choose one only)

Everyday ☐ Once a week: ☐ Twice a week: ☐ Once in 2 weeks: ☐

Once a term: ☐ Six times a term: ☐ More than six times a term: ☐

Not at all (zero): ☐

2.3 How many continuous assessments activities do teachers give learners in a term in each subject?

Less than two (2): ☐ two – three: ☐ Four – Five: ☐

Six: ☐ More than six: ☐

2.4 When do teachers assess learners in their classes at your school?

Everyday: ☐ Every week end: ☐ Every month end ☐

At the end of every topic: ☐ At the end of a term: ☐ In every lesson: ☐

2.5 How many continuous assessments do teachers give their learners in a month in each subject? None: ☐ One: ☐ Two: ☐ Three: ☐

Four: ☐ At least five: ☐

3.0 Section Three: Assessment practices

For each of the statements below, rate the frequency of occurrence based on your experience with teachers as headteacher. Choose among the four option; Always, Most of the times, Sometimes and Never. Show your response using a tick ✓ in the column that corresponds with your level of agreement.

Teachers give learners continuous assessment tasks that require them to:		**Always**	**Most of the**	**Sometimes**	**Never**
3.1	recall what they have learnt in class				
3.2	think in order to get the required response				
3.3	show their attitude towards what is being learnt				
3.4	demonstrate their motor skills				
3.5	show their feelings in what is happening in real life				
3.6	demonstrate knowledge on what they have learnt				
3.7	show their emotional state				
3.8	use the information learned in class in everyday life				
3.9	show understanding of what has been learned in their own words				
3.10	break down concepts into smaller parts to understand them better				
3.11	build up bigger concepts/ products from smaller ones				
3.12	make judgment on what they have learnt				

4.0 Section Four: Assessment techniques

How often do teacher use the following assessment techniques in their class?		Always	Most of the times	Sometimes	Never
4.1	Observation				
4.2	Exercises				
4.3	Projects				
4.4	Practical work				
4.5	Assignments				
4.6	Homework				
4.7	Essay questions				
4.8	Peer assessment				
4.9	Oral questions				
4.10	Tests				
4.11	Performance test				
4.12	Portfolios				
4.13	Anecdotal records				
4.14	Structured questions				
4.15	Objectives questions (multiple choice, matching items, blank filling, true/false items)				

5.0 Section Five: Effects of continuous assessment

Continuous assessment has the following effects on learner's performance:		Strongly Agree	Agree	Not certain	Disagree	Strongly Disagree
5.1	Learners who perform high on continuous assessment also perform high on end of term tests					
5.2	Learners who perform poorly and those who perform high on continuous assessment have equal opportunity to perform high on end of term tests					
5.3	The performance of learners on continuous assessment does not affect their performance on end of term test					
5.4	Creates confusion among learners about their academic performance					
5.5	Continuous assessment demotivates gifted learners					
5.6	Learners who write more continuous assessment perform high on end of term tests					
5.7	Learner's performance on end of term tests cannot be predicted by their performance on continuous assessment					
5.8	The number of continuous assessments administered does not affect the performance of learners during end of term test					
5.9	Learner's performance on end of term tests cannot be predicted by number of continuous assessments written during the term					

Appendix 4: Document review guide

School: _____ Class: _____

Number continuous assessment tasks in the portfolio: _____

1.0	**Learning Domains**									
	Are the continuous assessment tasks requiring learners to									Domain
1.1	recall what they have learnt in class									
1.2	think in order to get the required response									
1.3	demonstrate knowledge on what they have learnt									Cognitive
1.4	show their attitude towards what is being learnt									
1.5	show their feelings in what is happening in real life									
1.6	show their emotional state									Affective
1.7	demonstrate their motor skills									Psychomotor
2.0	**Bloom's Taxonomy**	✓	✓	✓	✓	✓	✓	✓	✓	
2.1	recall what they have learnt in class									Knowledge
2.2	show understanding of what has been learned in their own words									Comprehension
2.3	use the information learned in class in everyday									Application
2.4	break down concepts into smaller parts to understand them better									Analysis
2.5	build up bigger concepts/ products from smaller ones									Synthesis
2.6	make judgment on what they have learnt									Evaluation

3.0 Assessment techniques

What assessment technique did teacher use?		CA Task 1	CA Task 2	CA Task 3	CA Task 4	CA Task 5	CA Task 6	CA Task 7	CA Task 8
3.1	Observation								
3.2	Exercises								
3.3	Projects								
3.4	Practical work								
3.5	Assignments								
3.6	Homework								
3.7	Essay questions								
3.8	Peer assessment								
3.9	Oral questions								
3.10	Tests								
3.11	Performance assessment								
3.12	Portfolios								
3.13	Anecdotal records								
3.14	Structured questions								
3.15	Objectives questions (multiple choice, matching items, blank filling, true/false items)								

Appendix 5: Score collection form

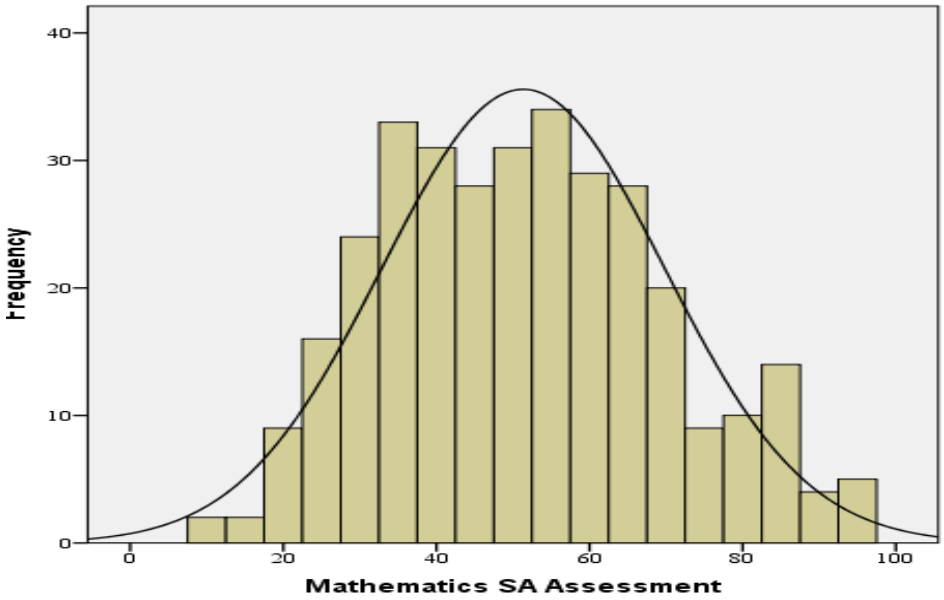
Name of the school: _____ Class: _____

		Mathematics										English										Expressive Arts									
NO	Learner's Name (First name only)	M 1		M 2		M 3		M 4		SA		M 1		M 2		M 3		M 4		SA		M 1		M 2		M 3		M 4		SA	
01																															
02																															
03																															
04																															
05																															
06																															
07																															
08																															
09																															
10																															

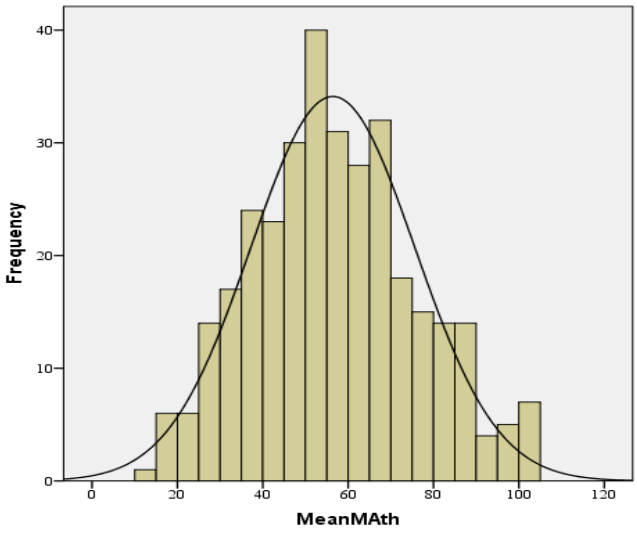
Key: M 1 = Month 1, SA = Summative Assessment

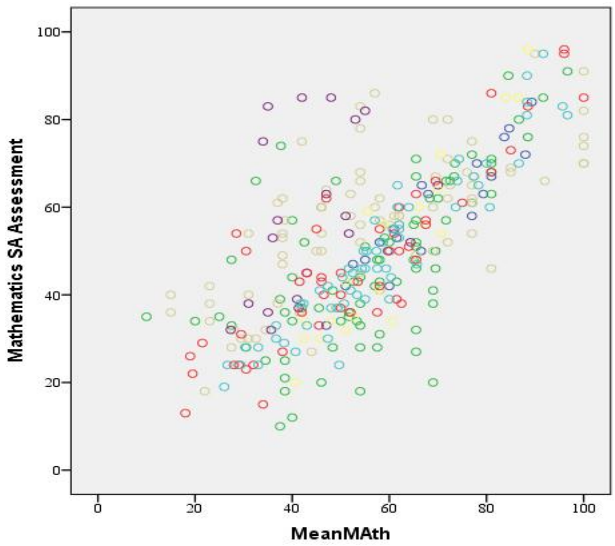
Appendix 6: Normality, linearity and homoscedasticity investigation

Normality, linearity and homoscedasticity investigation in Mathematics



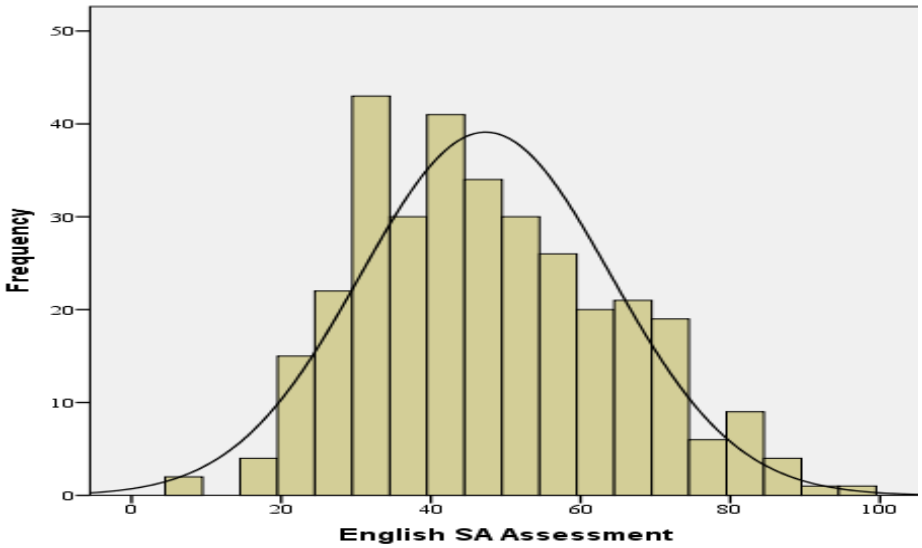
Summative Assessment



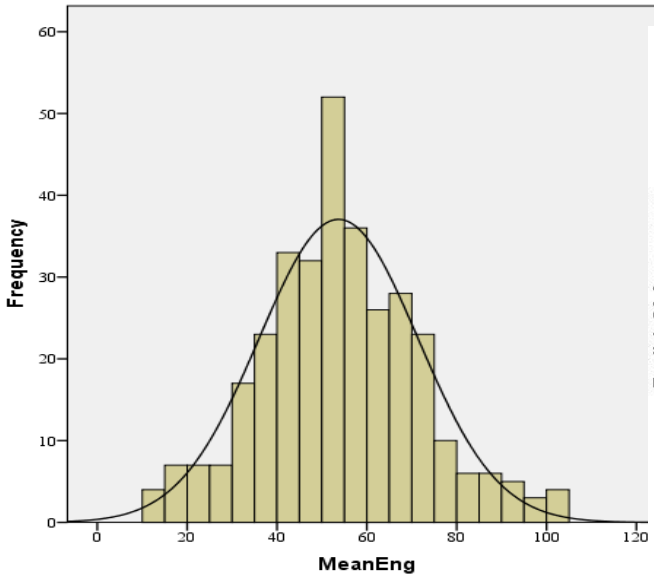


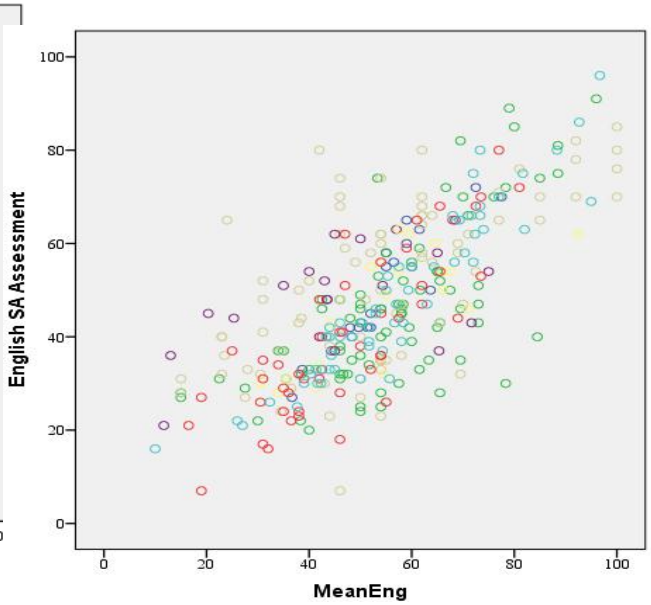
Mean of continuous assessment scores and performance on summative assessment

Normality, linearity and homoscedasticity investigations in English



Summative Assessment





Mean of continuous assessment scores and performance on summative assessment

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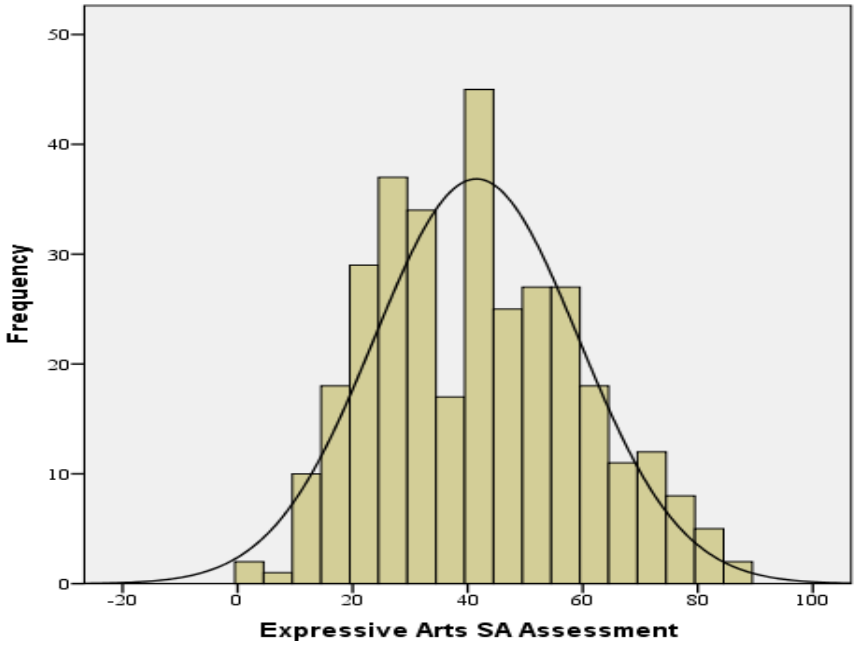
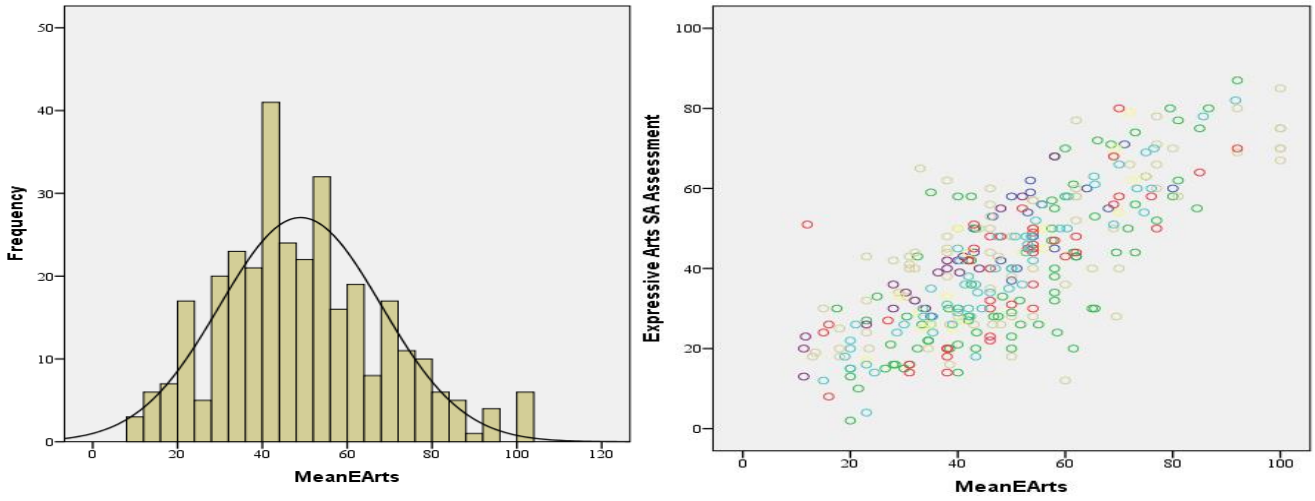
Normality, linearity and homoscedasticity investigations in Expressive Arts



Summative Assessment



Mean of continuous assessment scores and performance summative assessment

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