

**Exploring Lesotho primary school teachers' views about their
competence in using Authentic Assessment in their teaching**

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DECLARATION

I, Matebalo Mapinare M. Monoto (200904198), declare that the study entitled **EXPLORING LESOTHO PRIMARY SCHOOL TEACHERS' VIEWS ABOUT THEIR COMPETENCE IN USING AUTHENTIC ASSESSMENT IN THEIR TEACHING** is my personal effort, and all the sources that I have used have been designated and accredited by means of entire references.

Signature:



Date: 19th October 2024

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DEDICATIONS

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ABSTRACT

This descriptive qualitative study aims to explore primary school teachers' application of authentic assessment in relation to their competence in teaching at selected primary schools in Maseru, Lesotho. Data collection methods included interviews, observation, and documentation, followed by thematic analysis. The subjects of the study were teachers of fifth to seventh grades in the learning areas of mathematics, English, and creativity and entrepreneurship. The study revealed that teachers utilized authentic assessment to some extent by engaging learners in activities based on real-world situations addressing societal needs. However, the teachers were unaware of the term "authentic assessment," leading to their incompetence in applying this approach effectively.

The study identified several obstacles, including a scarcity of resources, particularly technical ones, a lack of preparedness for implementing innovations, and professional underdevelopment. These factors resulted in restricted learner skill acquisition, undermining the effectiveness of authentic assessment. In extreme cases, some concepts, such as essay writing, were not attempted because they were not recognized in the final assessment bridging learners into grade 8, despite being outlined in the curriculum. Consequently, the study recommends that curriculum developers collaborate closely with the examination council to address these issues. Additionally, it proposes that the government invest more in elementary education to meet the identified requirements, thereby fostering the country's economic growth from the foundational level.

Key six words from the abstract:

Authentic assessment, Teachers' competence, Data collection, Thematic analysis, Scarcity of resources, Curriculum development

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CHAPTER ONE: BACKGROUND

1.1 INTRODUCTION

Authentic assessment has become an essential component of educational systems in many nations worldwide, serving as a comprehensive means of evaluating learners' performance. This important assessment method primarily relies on the idea that education should mimic real-world experiences (Frey, Schmitt & Allen, 2012; Mueller, 2018). It aims to reveal a learner's capabilities in a holistic manner (Moria, Refnaldi & Zaim, 2018). Unlike traditional pencil-and-paper methods of assessment, authentic assessment considers all three domains of learning: cognitive, affective, and psychomotor (Hayati, Bentri & Rahmi, 2017). This comprehensive approach to assessment allows educators to gain a better understanding of a learner's overall competencies, enabling them to provide appropriate support and guidance for further development.

This chapter provides an overview of the study's purpose, goals, background, problem statement, and research questions. It also describes the significance of the study, offers a synopsis of the theoretical framework, and explains the research technique used for data generation and analysis.

BACKGROUND

In the current study, teachers' use of authentic assessment to evaluate learners' performance in Lesotho primary schools is investigated. Historically many education systems have heavily relied on standardised tests to assess learning. These tests often featured forced-choice assessments such as multiple-choice, true-or-false, fill-in-theblank, and matching tests. While some education systems continue to use these tests, there has been a recent shift towards the use of authentic assessment (AA), which is a more comprehensive approach to evaluating learner performance (Mueller, 2018).

Standardized tests, are primarily summative and curriculum driven (Mueller, 2018). Evaluation in these occurs after instruction, which is mostly teacher-centered and deprives learners of the opportunity to explore. An improvement was made once it was realised that standardised testing was restrictive and less direct and significant (Frey et al., 2012). Frey et al. (2012 p.2) note that Archbald and Newman, in a 1988 book about critical standardised testing, sought to “promote

assessment centered on meaningful realworld problems or tasks" which first introduced the concept of authentic tests. According to Kinay and Bagceci (2016), Wiggins originally coined the term "authentic assessment" in 1989. This was followed by theorists, educators, and teacher trainers backing authentic assessment as a useful tactic for evaluating learners in the 1990s (Frey, Schmitt & Allen, 2012).

Koh (2017) points out that since the late 1990s, authentic assessment has developed into a crucial tool for educational reform. According to Haidari and Karakus (2019), authentic assessment was adopted in the US as a move away from stereotypes associated with traditional assessment.

Therefore, nations have adopted it as a creative way to transition from conventional evaluation methods to alternative assessment tactics for effective learning. This is a global trend and Lesotho is not an exception, having selected authentic assessment for its Curriculum and Assessment Policy (CAP), which mandates the development of skills in addition to the application of procedures.

1.2.1 Understanding Authentic Assessment

Frey et al. (2012) state that there is not a universally accepted definition of authentic assessment because most academics have different ideas on what the term could entail. According to Wiggins (1989, p. 703), authentic assessment is a "true test" of intellectual capacity in which pupils must exhibit their in-depth comprehension, sophisticated problem-solving skills, and higher-order thinking. Wiggins (1990) also argues that an evaluation is deemed authentic when it closely scrutinises the performance of learners concerning their acquired skills and knowledge. Kinay and Bagceci (2016) and Sridharan and Mustard (2016) state that the main objectives of authentic assessment include understanding, critical thinking, reasoning, and metacognition through problem-solving. It encourages learners to consider how they think about their own ideas in light of actual circumstances and is intended to help them improve their talents (Sridharan & Mustard, 2016; Kinay & Bagceci, 2016).

Mueller (2018) argues that a true assessment consists of a task that learners have to finish as well as a standard by which to measure their performance. According to Mohamed and Lebar (2017), AA is dependent on scoring components, and learners should be informed of the criteria used so they may participate. Accordingly, Frey et al. (2012) stress that the marking criteria must be completed collaboratively between the teacher and the learners, using a variety of indications for

scoring and a portfolio assessment to gauge mastery performance. Hence, AA might be seen as a phenomenon that is difficult to rate. AA is thought to be subjective, making it more difficult to validate, and adopting a rubric seems to be the most acceptable course of action in this regard.

Assessing the level of achievement of AA (Authentic Assessment) can be challenging, as it is often considered a subjective phenomenon. In such cases, the adoption of a rubric can be the most appropriate approach, as it provides a clear and transparent framework for evaluating AA. By using a rubric, it becomes easier to confirm the level of achievement and provide constructive feedback that can help improve the quality of the work being assessed. According to Walden (2014), marking AA assignments is difficult because it takes time to grade learners' written work, especially in big classrooms. This is in contrast to previous assessment methods, which involved assessing learners based on scores that were calculated after response sheets were processed by computers. Designing tasks and creating rubrics therefore need planning (Mueller 2005, as quoted in Suarimbawa, Marhaeni & Suprianti, 2017).

Compared to traditional teaching methods, authentic assessment procedures are slow and have been linked to poor classroom supervision (May 2015; Hayati et al., 2017; Suarimbawa et al., 2017). Similar claims are made by Ghaicha (2016) and Villarroel, Bloxham, Bruna, and Herrera-Seda (2018) regarding the resource-intensive nature of authentic assessment. Additionally, it is claimed that to conduct authentic assessments, teachers must be highly skilled in creating tasks that allow learners to demonstrate conceptualization of ideas rather than just fact recall (Letina, 2015). Exceptional teachers must go above and beyond to create engaging learner-centered assessments (Aziz, Yusoff & Yaakob, 2020). Therefore, authentic assessment presents activities or challenges that are both personally and intellectually engaging (Frey et al. 2012:13).

Frey et al. (2012) provide more evidence that the reason authentic assessment activities are engaging is that they call for a great deal of learner participation and sophisticated thinking. In the words of Huyen (2017), authentic evaluation thus focuses on learners' proficiencies in realworld scenarios to enhance self-motivation and self-regulation so they can develop into lifelong learners. Tasks that mimic how information is evaluated in an everyday setting are indicative of authentic assessment (Koh, 2017 & Mueller, 2018). It consists of tasks that are intellectually challenging and performance-based, demanding learners to apply their information (Frey et al., 2012; Koh, Delanoy, Bene, Thomas, Danysk, Turner &

Champman, 2019). This knowledge should be useful for continued success outside of the classroom (Frey et al., 2012). Given that the assessment is decisive and intended to support self-reliant learning, learners' self-evaluation is crucial to authentic assessment, where they compare their work to current standards (Frey et al., 2012, Koh, 2017; Koh et al., 2019). Therefore, it is possible to see learners' roles as independent in directing their learning and possessing the capacity to defend their answers or final outputs.

1.2.2 Authentic Assessment as a Form of Formative Assessment

According to Aziz, Yusoff, and Yaakob (2020) and Lopez-Pastor, Kirk, Lorente-Catalan, MacPhail and Macdonald (2013), authentic assessment is one type of evaluation for learning. Frey et al. (2012), state any assessment that takes place during a learning session is formative. On the other hand, Khalil and Elkhider (2016) point out that both formative and authentic assessments encourage learners to take charge of their education through self-evaluation. Furthermore, it is claimed that assessment for learning places a high value on a learner's participation in goal-setting, open-ended tasks, and peer and self-evaluation (Brown, 2019). It is also beneficial for feedback provision, openended questions, and personal and peer assessment (Kadhim, 2020). In authentic assessment, equally the development and the product are important (Koh, 2017); formative assessment, on the other hand, focuses on a continuous process of enhancing learning (Brown, 2019).

Although formative assessment focuses on learners' knowledge, skills, and progression, authentic assessment, emphasises the practical application of knowledge in real-world scenarios (Suurtamm, 2015, as cited in Mueller, 2018). Formative assessment is a continuous process of evidence collection that informs teaching and learning by providing feedback on learners' progress and knowledge (Voinea, 2018), and enhances the teaching-learning process (Lopez-Pastor et al., 2013). Any activity that provides feedback on learning is considered a formative assessment, and it includes all the activities undertaken by teachers or learners to modify and improve learners' performance (Khalil & Elkhider, 2016; Glazer, 2014). According to Vero and Chukwuemeka (2019), formative assessment transpires throughout a class or course to support learners' needs and improve their achievement of learning objectives. Authentic assessment, on the other hand, requires formative assessment to be reflective and facilitate reflective teaching and learning (Frey et al., 2012). Therefore, authentic assessment is an integral part of formative assessment, and its purpose is to prepare learners for the real world (Rousseau, 2018). Formative and genuine

assessment help solve similar problems in teaching and learning and are intertwined. Frey and colleagues (2012, p.12) state that "if the determination of assessment is influential, then it is authentic.

1.2.3 Implementation of authentic assessment

The United States of America's No Child Left Behind Act has been a topic of debate for many years (Nguyen & Phan, 2020) and its implementation of mandated standardised tests resulted in significant pressure on both teachers and learners. Nguyen and Phan (2020) illustrated the pressure has led to changes in how content is delivered, the methods and techniques used for effective delivery and how scholars' mastery of information and skills is measured (Nguyen & Phan, 2020, p.22). However, alternative assessments, such as authentic and formative assessments, have been recognised as more effective ways of achieving educational goals and promoting autonomous learning. Formative assessment was introduced in primary schools in the UK and the US two decades ago to improve the quality of learning. Formative assessment is an ongoing process that helps teachers identify the strengths and weaknesses of learners and adjust their teaching accordingly. However, it has not been easy to employ decisive assessment in line with the elevated concerns associated with its execution (Kadhim, 2020; Koh et al., 2019; May, 2015; Rickey & Coombs, 2021). Despite these challenges, research indicates teachers to have successfully applied both formative and summative assessments in these countries. Summative assessment is a final evaluation of learning at the end of a course or unit.

Authentic assessment tasks have been included in the assessment strategies in both the UK and USA (Koh et al., 2019). Authentic assessment emphasises the application of knowledge and skills in real-world settings and is more effective in measuring learners' ability to solve real-world problems (Kadhim, 2020). Koh et al (2019) note shared success criteria and feedback provision as also important components of authentic assessment. Many teachers in the US public schools use authentic assessment, particularly in primary education, though some do not use it due to the time required (Lopez-Pastor et al., 2013). Nevertheless, the study notes that educators are inadequately trained to apply authentic assessment. In the UK and USA, teachers are encouraged to use both formative and summative assessments to improve the quality of learning (Kadhim, 2020).

Canadian teachers consistently use authentic assessment methods and instruments and highly valuing assessments that enhance learners' metacognition and independence in acquiring proficiencies (DeLuca, Rickey and Coombs, 2021). A learner-centred is habitually employed, advocating for learners' autonomy in the learning process, although, teachers lack support in their implementation (DeLuca, Rickey and Coombs, 2021).

Teachers are encouraged to use authentic assessment to promote a deeper understanding of the subject matter and to encourage learners to apply their knowledge and skills to real-world problems.

Additionally, in Canada, problem-solving booklets were developed to stimulate learners' mathematical reasoning, requiring them to support their solutions to convince the group (May, 2015). This approach emphasises the process rather than just the final product as advocated by authentic assessment. May (2015) further insists that procedural learning has helped learners develop deeper levels of understanding, enabling them to recall and apply ideas for extended periods reducing the need for mere memorisation and increasing comprehension to solve real problems. However, the study alleges that Canadian teachers have lacked content in Mathematics, which negatively impacts the implementation of authentic assessment processes amongst other practices.

The Netherlands has been at the forefront of developing innovative classroom formative assessment (CFA) models to address the long-standing problem of underperformance in Mathematics by Dutch primary school learners in international tests (Van den Berg, Harskamp and Suhre, 2016). In response, a collaborative effort between researchers, curriculum experts, and teachers resulted in the development of a CFA model. As confirmed by Van den Berg, Harskamp and Suhre (2016), while the pilot schools successfully implemented the model, some teachers reverted to their old routines due to extracurricular activities consuming much of their time and effort. It was recommended that teachers receive coaching to ensure the successful implementation of educational innovations (Veldhuis & Heuvel-Panhuizen, 2016). In addition, Kippers, Christel, Woltenrinck, Schildkamp, Poortman and Visser (2018) reported that workshops aimed at advancing elementary educators' classroom assessment practices resulted in significant improvements in learners' success in Mathematics. However, the study showed that only 10%-25% of teachers practiced peer and self-assessment in their lessons, indicating a requirement used for educator proficient

improvement in assessment for learning (AfL). Another study, by Heitink, van der Kleij, Veldkamp, Schidkamp and Kippers (2016) illustrated the significant impact of implementing AfL in the Netherlands, but the aspects that hamper expedition in the classroom remain uncertain.

As a result, it is essential that educators can interpret assessment information, engage learners and provide meaningful feedback, and that schools maintain unified values among instructors to ensure autonomy in implementation (Heitink et al., 2016). The study aimed to explore teachers' comprehension of authentic assessment and how they implement it in their teaching. The findings of the study will help to improve teacher competencies for effective facilitation of assessment, leading to an improvement in learners' achievement.

1.2.4 Recent Studies in Lesotho

Authentic assessment (AA) is an effective educational strategy that assesses a learner's knowledge and skills by supplementing traditional paper and pencil examinations with innovative assessment methods (Ministry of Education and Training (MOET), 2009 p.vi).

However, the effectiveness of AA is dependent on the availability of resources, which may be limited in developing countries such as Lesotho.

Lesotho's previous education system relied on paper and pencil assessments, which only categorized learners based on their performance without considering their skill acquisition (Khalanyane & Hala-hala, 2014). In order to close this gap, Lesotho created the Curriculum and Assessment Policy (CAP) in 2009. This policy sought to teach learners how to solve problems, solve them effectively, think critically, solve scientific, technological, and creative problems, collaborate with others, think critically, and learn functional numeracy (MOET, 2009, p. vi). In addition to summative assessments, the CAP highlighted the need of AA techniques that demonstrate what a learner understands and is capable of.

The 2013 interim curriculum that was introduced in Lesotho's primary schools appears to meet AA's requirements. For the sake of the learners' survival, this curriculum promoted a comprehensive approach to and treatment of issues about intelligence, maturity, and social and personal development (MOET, 2009, p. 15). But even with all of AA's advantages, the idea has not gotten much academic attention in Lesotho.

Thus, Khechane's (2016) study found that most teachers relied heavily on tests and examinations, which failed to provide learners with qualitative feedback. Teachers did not use innovative assessment methods such as portfolios, and some did not give learners any standards by which to evaluate their peers' or their own work. Similarly, Lesitsi's (2022) study on teachers' application of formative assessment in secondary schools revealed that teachers focused more on grading than learners' progress, and heavily relied on summative assessments due to high learner-teacher ratios.

One of the longest-standing obstacles for teachers has been their lack of experience using AA techniques like portfolios. According to Chere-Masopha and Mothetsi-Mothiba's (2022) research, instructors in Lesotho's elementary schools experienced challenges like a lack of resources, time, and expertise when it came to maximizing the use of AA approaches.

Therefore, professional training in innovative assessment methods is necessary to overcome these obstacles. Consequently, this study aims to investigate educators' opinions regarding their competencies in utilizing authentic assessment in instruction, which is significant in enhancing the quality of education in Lesotho.

1.3 STATEMENT OF THE PROBLEM

Authentic evaluation is an innovative approach to assessment that is being adopted by educational systems around the world. It emphasises the importance of the curriculum being driven by assessment, teachers first decide what assignments learners will complete to show that they understand a subject, and then they create the curriculum that will allow learners to complete those assignments (Mueller, 2018). This approach is mostly learner-centered (Ozan, 2019) and requires professionally skilled teachers as implementers, which is a challenge for many primary school teachers who lack these skills (Ekawati, 2017; Suarimbawa et al., 2017).

Some of the most popular authentic assessment methods include demonstration and portfolio, but these methods are not widely used due to inadequate knowledge and training among teachers (Singh, Leba, Kepol, Raham & Mukhtar, 2017). The implementation of authentic assessment is hindered in Lesotho by several factors, including low teacher preparation due to training, time constraints, resource scarcity, high learner-teacher ratios, and limited or non-use of some authentic assessment methods, such as portfolios (Chere-Masopha & Mothetsi-Mothiba, 2022; Lesitsi, 2022; Khechane, 2016).

Therefore, the goal of this study is to investigate how teachers perceive real assessment and how much they use it to improve their instruction.

1.4 AIM OF THE STUDY

The research seeks to explore teachers' views on authentic assessment and their ability to implement it in chosen primary schools in Maseru.

1.4.1 Research objectives

1. To investigate how primary school teachers perceive authentic assessment in the curriculum delivery process.
2. To explain how authentic assessment practices are used by primary school teachers.
3. To clarify teachers' perceptions regarding their training and competency in using authentic assessment.

1.4.2 Research questions

The research issues that the study aims to address are as follows:

1. How do primary school teachers view authentic assessment in the context of curriculum delivery?
2. To what extent do primary school teachers use authentic assessment methods?
3. How do teachers perceive their training and competency in using authentic assessment?

1.5 SIGNIFICANCE OF THE STUDY

This research aims to bring significant changes to the Lesotho education system by explaining how authentic assessment can improve teaching and learning. The findings will help the Ministry of Education evaluate the CAP and create awareness among stakeholders, policymakers, and the National Curriculum Development Centre (NCDC) about the shortcomings and inconsistencies in policy implementation. Moreover, the study will inform future research on authentic assessment methods in Lesotho. It will shed light on the issues related to teacher training for the use of authentic assessment. Since, teachers seem to have lost interest in furthering their studies due to the government's cease of teachers' automatic promotion, institutions, with starter certificates like diplomas should revise courses to include alternative assessments such as AA to better inform teachers. Finally, the study will help the Examination Council of Lesotho (ECOL) in determining the end level of assessment for primary schools, bridging learners into grade

8.

1.6 THEORETICAL FRAMEWORK

Constructivist theory is widely recognised as the most appropriate theoretical framework for the study of authentic assessment. It has been suggested by Aliningsih and Sofwan (2015) that authentic assessment emerges from a constructivist approach. This theory emphasises that learners actively construct their knowledge through engagement during the educational process, as opposed to only receiving information. Authentic assessment strategies are designed to aid learners in taking charge of their education, with the teacher acting as a facilitator to assist learners in overcoming their learning challenges (Parwati, Suarni, Suastra & Adnyana, 2018).

As per Piaget, constructivism explains how knowledge is mentally produced. Pupils are curious to understand the meaning behind the information provided to them, even when the knowledge is incomplete. Learners organise their experiences based on their mental structures and schemes, and new information is added to the existing knowledge to construct a deeper understanding (Bodner, 1986; Kouicem, 2020). Therefore, authentic assessment backs practical learners who can use critical thinking to generate their own learning (Koh, 2017). Piagetian cognitive theory is deemed relevant with authentic assessment in considering the involvement of learners to construct their own knowledge which helps teachers better comprehend learners' thinking (Blake & Pope, 2008), for them to align teaching and learning activities to the cognitive level of learners. Thus, as earlier indicated AA requires skilled teachers to design tasks for learners' demonstrations of their competencies.

In contrast, Vygotsky's theory suggests that knowledge is socially constructed through interactions with peers and teachers. Similarly, Blake and Pope (2008) Vygotsky's sociocultural theory focuses on social interaction regarding learning to proceed by peer-to-peer and adult assistance to enhance learning achievement. Thus, advocated by AA that learning activities be related to societal activities through which learners gain interaction with the community surrounding them. Further relevance of Vygotsky's social constructivism to authentic assessment by Wibowo, Wangid and Firdaus (2025) in stating the theory to be characterized by the zone of proximal development which attends to a learner's entire being and capabilities, as does AA which aims at unfolding each learner's abilities. Teachers play the role of overseers, while learners interact with one another and use various knowledge sources, such as books, computers, and peer grouping, as a strategy (Kouicem, 2020; Rintaningrum, 2008). Almost all studies indicate that authentic assessment

requires significant resources to administer, while also emphasising the importance of collaborative learning. Project grouping is considered a suitable method for achieving this aim (Kinay & Bagceci, 2016).

1.7 RESEARCH METHODOLOGY

Research methodology is a systematic guide that helps researchers obtain the required information in a procedural manner (Harrison, Birks, Franklin & Mills, 2017). It involves deciding why, what, when, and how data is collected and analyzed Crotty (1998). In simple terms, it is a strategic plan or design that helps researchers choose and use certain methods to achieve their desired results (AL-Ababneh, 2020). Qualitative research methodology was adopted in this research.

1.7.1 Research paradigm

The present study has adopted an interpretive paradigm to elucidate how teachers develop a nuanced understanding of the world they inhabit and work within. According to Creswell and Creswell (2018), interpretivism entails the explanation of human and social reality based on the subjective views of participants. AL-Ababneh's (2020) definition of interpretivism underscores its potential to highlight the socioeconomic issues that are veiled through approaches that generate vision into comprehending behaviour and

participants' points of view. Scotland (2012) posits that epistemologically, Interpretivism emphasizes individual interpretations, societal concerns, particulars in actual circumstances, and inspiring behaviors. Conversely, interpretivist ontology contends that reality is arbitrary and differs among individuals (Scotland, 2012). The study employed interviews, classroom observations and document analysis to gather data in a natural setting where authentic assessment exercises occur.

1.7.2 Research Approach

The study utilised a descriptive research design and adopted a qualitative research approach. The motive for choosing the qualitative approach was to observe instances that happen effortlessly in their regular surroundings (the classroom), where teachers' assessment exercises and instruction occur. Elkatawneh (2016) defines a qualitative approach as gathering data from participants' words and deeds in the field in its natural setting while focusing on their perceptions and experiences as they make sense of their own lives. It seeks to understand people's experiences, perceptions, and behaviors through observations, interviews, and other non-numerical data collection methods (Creswell, 2014). Additionally, qualitative research is known for its exploratory nature, as it seeks

to obtain a better comprehension of participants' involvement and perceptions (Scotland, 2012). Thus, this research explores the insightful thoughts of teachers regarding their implementation of authentic assessment.

1.7.3 Research Design

To thoroughly investigate the event, activity, and process of one or more individuals, the research used a qualitative case study design (Creswell & Creswell, 2018). Data was collected through various methods that were limited by time and activity. Starman (2013) suggests that case study research can involve quantitative, qualitative, or a blend of the two, but it is frequently associated with qualitative methods. Given its connection to constructivism, phenomenological method, and interpretivism—three pillars of qualitative research—case study research is therefore seen as a subset of this sort of research (Starman, 2013). Interpretivism, Phenomenology, and Constructivism are three perspectives that center on the actuality of personal experiences, much like case studies do, focusing on a specific case and its capabilities. A case study may include about four to five instances representing a person, program, group, or particular policy, individual, institution, or community (Yazan, 2015; Rashid et al., 2019).

Case studies, according to Starman (2013), are intended to explain and examine the activities, special needs, circumstances, and life history of an individual, a group of learners, a department within a school, a teaching staff, or an issue. Through the description and analysis of specific instructors' actions when using this method, this study employs a case study to investigate teachers' comprehension and use of authentic assessment. Because case study research is utilised when little is known about a phenomenon, as is the situation with authentic evaluation, it is therefore perfect for this study. Cases are restricted to a certain era and activity, and data is gathered by researchers over an extended period using a variety of data-gathering techniques (Creswell, 2014). For this reason, the best design for this study is a case study.

1.7.4 Participants Selection

Purposeful sampling was adopted as a suitable sampling method for the investigation. The units to be investigated in this method—people, organisations, and events—are chosen at the researcher's discretion (Casteel & Bridier, 2021; Taherdoost, 2016). When choosing units, the researcher typically has a specific concept in mind to obtain a deeper understanding (Etikan et al., 2016). Purposive sampling uses participants who are sufficiently knowledgeable about the subject matter

to offer original and insightful information (Etikan et al., 2016). Two primary schools located in the Maseru district were chosen. Teachers in grades 5, 6, and 7 were selected for the current study's observation, and interview processes.

1.7.5 Data Collection

Information was collected for the present paper using three methods: interviews, observations, and document analysis. The use of multiple methods allowed researchers to cross-check different data sources (Creswell & Creswell, 2018) to ensure that their findings were accurate. I observed teachers' learning activities for their implementation of authentic assessment, using audio records, and also examined teachers' documents such as scheme books or lesson plans. Qualitative research uses interviews, usually semi-structured discussions, surveillances, and official papers are commonly used as information-gathering methods (Creswell, 2014; Rashid, et al., 2019; Creswell & Creswell, 2018).

1.7.6 Data Analysis

For the study, I adopted thematic analysis as the appropriate technique for analyzing data.

This method is characterised by its accessibility and flexibility in analysing qualitative data that has been collected in natural classroom settings (Xu & Zammit, 2020). Six phases were followed while conducting a thematic analysis of data: getting acquainted with the data, coming up with preliminary codes, looking for themes, going over themes, and identifying themes (Maguire & Delahunt, 2017). The capacity of thematic analysis to assist in identifying patterns and themes in the participants' application of authentic assessment as well as the reasons why such incidents occur in the manner that they do make it appropriate for this study.

1.7.7 Trustworthiness

Creswell and Creswell (2018) state that research must present procedures followed to confirm the veracity and accuracy of findings. This research employed four criteria - credibility, dependability, confirmability, and transferability - to explain the trustworthiness of the research methods used (Kivunja & Kuyini, 2017).

1.7.8 Ethical Consideration

Ethical considerations are a crucial aspect of research that researchers must take into account to avoid misconduct. Creswell (2014) asserts that to preserve participants' privacy and confidentiality both during and after the study process, researchers must take ethical issues into account and

account for participants' rights, needs, values, and wishes (Rashid et al., 2019). To do this, Creswell and Creswell (2018) advise researchers to get permission and consent from the college or university. I ensured that participants gave informed consent because they were fully aware of the expectations and were informed of any potential harm (Young et al. 2018).

CHAPTER 2- LITERATURE REVIEW

2.1 INTRODUCTION

The chapter discusses the theory adopted for the research before addressing the concept of assessment as a comprehensive phrase and its primary forms. It then provides an overview of authentic assessment and a comparison of AA with traditional assessment. A discussion is made on information on the policy input and assessment needed to implement authentic assessment in the Lesotho educational system. Teachers' understanding of authentic assessment in implementing the curriculum at the primary school level is one aspect of these reviews, the methods they use to apply authentic assessment, and their thoughts on training to implement authentic assessment. Additionally, the chapter covers methods by which educators can implement authentic assessment in their classrooms.

2.2 THEORETICAL FRAMEWORK

Constructivism, a theory developed by Piaget and Vygotsky, recognizes that learners construct knowledge, which they should then apply. Constructivism as adopted for this study looks at how learning is facilitated to move beyond mere memorization to comprehension and proficiency (Kouicem, 2020) and examines processes involved in acquiring information or learning (Kouicem and Nachua, 2016). According to Kouicem (2020) and Kouicem and Nachoua (2016), Piaget (cognitive constructivism) and Vygotsky (sociocultural constructivism) are two of the most prominent pioneers who thoughtfully considered how individuals actively contribute to the creation of knowledge. Piaget is considered the most important proponent of constructivism, which emphasizes the importance of the person in the process of meaning-making, (Bozkurt, 2017; Bodner,

1986). As Kouicem (2020) notes, in Piaget's cognitivist constructivism, learners construct knowledge in their mind by organizing their own experiences, whereas knowledge is created through social and cultural interactions according to Vygotsky's sociocultural constructivism. It is believed that acquiring knowledge is a social and cognitive process (Kouicem, 2020). Constructivism and the study are compatible since in AA, learners are required to generate their learning by applying their information and showcasing their abilities.

2.2.1 Piaget's theory of cognitive development

Based on Bozkurt (2017), Piagetian constructivism describes the process of mental building as when a person adds new knowledge to an understanding that they have already created. According to Woolfolk (2016), Piaget's cognitive theory is predicated on the notion that humans attempt to understand the world, producing knowledge through their interactions with objects, people, and concepts. This is consistent with the current study's suggestion that learners should oversee their education by gaining knowledge and making sense of their surroundings. As a result, Blake and Pope (2008) suggest that learners' participation in the learning environment is crucial in helping teachers understand learners' thought processes, which in turn helps them decide which strategies match the learners' needs, taking into account their cognitive level. Teachers who use authentic assessment should consider learners' cognitive, affective, and psychological development.

Additionally, Piaget's theory as stated by Blake and Pope (2008), promotes experiential learning, whereas Vygotsky emphasises learning through social interactions. According to Piagetian constructivism, knowledge is created by the learner in their mind (Bodner, 1986), and this aligns well with the study's emphasis on producing knowledge rather than simply reproducing information from others, as highlighted by (Dung & Ha, 2019). Woolfolk (2016, p. 403) contends that "learners are not empty vessels waiting to be filled but rather active organisms seeking meaning." Frey et al (2012) also emphasise that authentic assessment is an evaluation that presents intellectually intriguing and personally meaningful tasks. Thus, according to Woolfolk (2016) and Bodner (1986), learning is a constructive process in which learners build their understanding. They should also manipulate objects both mentally and physically. As a result, learning ought to be a process, and methods such as physical and mental evaluation of learners' learning can aid in the development of critical and creative thinking. This links the constructive process to authentic assessment.

2.2.2 Vygotsky theory of sociocultural development

Mentz and Lubbe (2021) have noted that as knowledge is formed through interactions, social constructivism—as put out by Vygotsky—cannot be divorced from social context. Bozkurt (2017) claims that social constructivism is a learning theory that holds that knowledge arises spontaneously from outside the knower's head. According to Kouicem (2020), social constructivism sees learning as the result of learners' ideas and their interactions with teachers.

That is, knowledge is built up in the mind through a variety of experiences, which is supported by realistic assessment that pushes learners to consider information from a variety of angles. Blake and Pope (2008) contend that, like AA's support of group learning, Vygotsky thought that knowledge is formed via interpersonal relationships.

Vygotsky focuses on two issues related to child development: evaluating children's intellectual capabilities and assessing the effectiveness of teaching practices that improve these capabilities (Poddskiy, 2012). Vygotsky's social perspective argues that human activity is understood in a cultural setting where the interplay between mental structures and processes can be identified (Woolfolk, 2016). According to Woolfolk (2016), learning and development are most likely to take place in the Zone of Proximal Development. Culture, and language, in particular, is a tool that promotes development. Zone of Proximal Development refers to Vygotsky's theory that a child's intellectual richness results from cooperation with an adult (Kozulin, 1986). This is the moment when an adult who can reason logically meets a toddler who has chaotic, spontaneous concepts and makes up for the child's shortcomings.

The Zone of Proximal Development, according to Vygotsky (1978, p. 87), is "the distance between the actual development level, as determined by independent problem solving under guidance or in collaboration with more capable peers." Kouicem (2020) points out that peer-to-peer interactions—in which peers serve as role models for other learners—have a significant application in social constructivism. Because peers may have similar understandings and because they operate at different cognitive levels, less advanced peers can correct more advanced peers' misinterpretations with advice from more advanced peers, peer tutoring is thought to be more effective than teacher-led instruction (Kouicem, 2020; Woolfolk, 2016). To encourage self-regulation, prevent loss of interest, and encourage learners to take risks until they adjust and gain understanding on their own, it is stated that educators should make the most of activities that are tailored to each learner's unique needs (Kouicem, 2020). According to Kouicem (2020), Piaget's theories also support the idea that learners should be allowed to think abstractly until they get the necessary comprehension. These findings suggest that, in the context of teaching and learning, peer and self-evaluation play equally significant roles. This is especially true for studies where peer and self-assessment are regarded as genuine assessment techniques that raise learner accomplishment.

2.2.3 The difference between Piagetian and Vygotsky's perspectives

Vygotsky thought that the individualisation of original communication for others is more significant than the assumption that socialization is the primary cause of speech problems (Kozulin, 1986). He argued that outward psychological relations manifest into inner psychological mental functions. Piaget disagreed with Vygotsky as he believed that children begin with inner autism thinking, followed by egocentric thinking or speech, and that socialized speech and logical thinking come last (Vygotsky, 1962). Woolfolk (2016) explains that Vygotsky's social cognitive development theory stems from social interaction and language development. She also illustrates that according to Vygotsky, the child's role is to be guided and monitored in thinking and problem-solving, while Piaget proposed the concept of "private speech," which, in his opinion, demonstrated the child's egocentrism. In contrast to Piaget, Vygotsky highlighted the critical role that adults and more experienced peers play in children's learning. This means that early support is important for learners to develop the understanding they need to solve issues on their own (Woolfolk, 2016). As he puts it, "Children not only speak about what they are doing; their speech and actions are part of the same complex psychological function, directed toward the solution of a problem" (Vygotsky, 1978, p. 118). This point of view supports the phenomenon found in the study, which calls for learners to be problem solvers.

Although Piaget agrees that a child's social environment plays a big role in their development, he does not consider social environments as necessary for altering a child's way of thinking. According to Kozulin (1986), Piaget concurs with Vygotsky that the first purpose of language is global communication, which subsequently separates into communicative and egocentric speech. Piaget, however, disagrees with Vygotsky that different linguistic forms can be socialised in the same way, maintaining that the word

"socialisation" could be ambiguous in this context and that individuals' thinking differs

(Kozulin, 1986). After a lesson, learners may not think about the aspects learned in the same way, or a similar manner, as they would during an experience in real-life situations in the learning arena. Woolfolk asserts that Piaget and Vygotsky shared the view that education should focus on the development of higher mental functions rather than rote memorization of facts. In consequence, learners must generate their knowledge while still receiving assistance from their teachers and competent peers to engage in authentic assessment, which is the phenomenon under investigation

in this study. Effective implementation of authentic assessment in the learning environment necessitates the presence of competent teachers. Given that children truly learn from their surroundings, Vygotsky's perspective on social and cultural aspects of life seems most relevant, even though the two theories complement each other, with the strength of one theory adding value to the weakness of the other. On the other hand, Piaget also supports the social component, noting that it may have shortcomings.

2.2.4 Implication of Constructivism for Learning

Constructivist learning and assessment are viewed as social and cooperative activities that help learners enhance their evaluation, learning, and thinking skills through cooperative work (Mentz & Lubbe, 2021). These writers argue that constructivism emphasises learning processes and feedback as key components of preparing learners for lifetime learning. According to Woolfolk (2016), learning should be balanced to support learners' development rather than subjecting them to assignments that are either too simple or too tough, a phenomenon known as disequilibrium, which would bore them in the classroom. This could imply that for learning to be effective, learners require sufficient assistance. Resultantly, it is proposed that scaffolding—which is defined as recognising learners' needs, offering appropriate support when needed, and providing information, prompts, and gradual encouragement to let learners complete the majority of the work independently—is necessary for facilitated learning in the classroom (Woolfolk, 2016). According to Woolfolk (2016), teachers can facilitate learning by tailoring materials or problems to their learners' current skill levels, modeling techniques, having learners work through a complex problem step-by-step, giving thorough feedback, permitting revisions, and posing attention-grabbing questions. This method is supported by authentic assessment, which calls for teachers to serve as facilitators and let learners do the remaining tasks.

Therefore, Bodner (1986) posit that constructivism is essential in schooling because it necessitates teachers to change from delivering information to smoothing gain of knowledge and negotiations. Teachers also provide learners with opportunities to collaborate in solving problems, perform authentic tasks, and create an overall conducive environment (Alzahrani & Woollard, 2013). Additionally, learners frequently get the chance to participate in challenging, group-based, problem-solving exercises, which are facilitated by teachers using tools like information technology (Woolfolk, 2016). However, according to Bodner (1986), in a constructivist paradigm, children can only learn social conventions through direct instruction, which is thought to be the

only method by which certain types of knowledge can be taught. Thus, according to the study, the affective domain is enhanced as learners learn about norms and rules governing various behaviors that people engage in every day.

Based on Brown (2019), genuine evaluations are objective measurements. The paradigm places a strong emphasis on two-way communication between educators and learners. Learners are allowed to explain vocabulary or equations they employ when a constructivist instructor queries their answers (Bodner, 1986). More, he contends that the distinction between rote learning and meaningful learning is made by the notion that information is created in the learner's mind. This is in line with the goal of the current study, which is to ascertain how competent teachers are at using real assessment in subject areas like Mathematics and English.

Likewise, it is asserted that rather than concentrating on preset correct answers, learners should apply knowledge in a variety of authentic contexts, employ higher-order thinking abilities, and create arguments based on evidence (Woolfolk, 2016). Alzahrani and Woollard (2013) talk about learning activities that learners engage in, in the classroom, like writing, reading, and thinking exercises. These activities assist learners develop their collaboration abilities, acquire new knowledge, and ultimately see the need to gradually change the way they think. Therefore, Brown (2019) suggests that constructivist learning involves meaningful action by a learner who does things independently, rather than others doing it for them.

According to Semmar and Al- Thani (2015) both Piagetian and Vygotskian theories emphasise learning through interaction, although from different perspectives. Piaget's theory indicates learners to learn better in interacting with their environment. On the other hand, Vygotsky theory emphasises that it is through social interaction that learners can learn (Semmar & Al-Thani, 2015). Moreover, Blake and pope (2008) regard these two theories as advantageous in providing opportunities for learners to peer-teach which enhances their thinking capacity and problem-solving skills. Overall, a constructivist perspective caters to individual and peer-assessment techniques of authentic assessment, whereby learners are in charge of their education.

2.3 AUTHENTIC ASSESSMENT

2.3.1 Introduction

The purpose of this segment is to discuss authentic assessment. To achieve this, the section first provides a comprehensive definition of authentic assessment, highlighting its key features and

characteristics, it explores various assessment methods that are closely linked with the use of authentic assessment implements, which exist to facilitate teaching and acquiring data.

Moreover, it delves into the significance of the factors that define authentic assessment to give comprehension of the importance of using this tactic for assessment, as opposed to traditional assessment methods. By the end of this section, readers will have a clearer understanding of the concepts and principles that underpin authentic assessment and how it can be used to achieve better learning outcomes.

2.3.2 Assessment

Assessment involves a methodical procedure for compiling and discussing material to document learners' acquisition of certain knowledge outcomes. The success levels of learners are influenced by the methods and tools used in learning facilitation (Letina, 2015; Lubbe & Mentz, 2021), leading to the provision of support for learning and achievement (Stiggins, 2017). Obtaining information through assessment is used to make choices about learners, core curriculum, programs, and scholastic policies concerned with how to obtain relevant learning facts (Brown, 2019). By concluding the data, educators can demonstrate the competency of their learners and take appropriate measures to improve teaching and learning (Monteiro, Mata, & Santos, 2021). For Stiggins (2017), evaluation procedures inspire curiosity and foster a sense of success in learners. Formative assessment, also known as assessment for learning, and summative assessment, also known as evaluation of learning, are the two primary forms of assessment (Amua-Sekyi, 2016). Effective teaching and learning benefit from these two assessments, and moving away from traditional assessment recognises the importance of both evaluation of learning and assessment for learning (Stiggins, 2017). A description of summative and formative assessment follows.

2.3.2.1 Summative assessment

Summative assessment is a way of evaluating what a learner has learned after the conclusion of a course, semester, or unit (Lubbe & Mentz, 2021). It measures how much knowledge and skills learners have acquired. According to States, Keyworth and Detrich (2018), summative assessments evaluate learning after instruction or at a predetermined point in time. Instead of concentrating on the individual, it compares learner knowledge or skills to benchmarks and assesses how a group reacts to an intervention. This type of assessment allows teachers, administrators, and parents to make effective judgments about content, guidance, and curriculum to fulfill regional, national, and

local requirements. Mid-term exams, ultimate projects, high-stakes examinations, and assessments created by teachers are all examples of summative assessments (States et al., 2018).

Closed-ended questions: fill-in-the-blank, multiple-choice, and true/false are also examples of summative assessment (Glaser, 2014). Standardised tests are a subset of summative assessment, as they provide uniformity in assessing learners across schools and anticipate performance, regardless of context or socioeconomic background (States et al., 2018). Summative assessment serves accountability and certification purposes and is a final judgment on learners' performance (Monteiro et al., 2021; Amua-Sekyi, 2016). Additionally, for Amua-Sekyi (2016), it involves a crucial evaluation that not only measures learners' performance but also that of educators and school systems. As the current study focuses on formative assessment, examples of formative assessment will be provided below.

2.3.4 Formative assessment

One could argue that the goals of formative and authentic evaluation in education are comparable. This is because an assessment is authentic if it is intended to be formative (Frey et al, 2012). Formative assessment is an ongoing process that gathers data on learners' learning and pinpoints challenges that learners encounter to adjust learning strategies and improve teaching methods (Lubbe & Mentz, 2021). Frey et al. (2012) claim that formative assessment takes place in the classroom when learners evaluate their progress without necessarily having an impact on their grades. Furthermore, formative assessment is a process that supports learners in assessing their current level of learning, pinpointing areas of weakness, and informing teachers about any misunderstandings for better learning through reflections (Tortajada-Genaro, 2022; Dung & Ha, 2019).

Amua-Sekyi (2016) says formative assessment happens when learners and teachers collaborate and provide feedback on each other's work to enhance learning. Additionally, Rousseau (2018) contends that the main purpose of formative assessment is to enhance learners' learning by giving them continuous feedback to address their challenges and help teachers improve their instruction. Teachers can use this feedback to better identify their areas of skill in teaching (Amua-Sekyi, 2016) and provide suggestions to improve the achievement of their learners. According to Glaser (2014), all assignments that provide feedback to learners during the learning process—such as open-ended questions, essays, and performance tasks like projects, presentations, and posters—are considered

formative. Nonetheless, closed-ended questions—like multiple-choice questions—can be employed for diagnostic purposes, evaluating learners' prior knowledge to direct the course of instruction (Glazer, 2014). The current study sees formative assessment as a driving force for teachers to understand how to begin the teaching process. Therefore, formative assessment encompasses authentic assessment, as described below.

2.4 CONTEXTUALIZING AUTHENTIC ASSESSMENT

As defined by scholars, authentic assessment is an evaluation technique that places instructional activities and learning outcomes in realistic or near-realistic contexts (Brown, 2019; Frey et al, 2012; Ghaicha, 2016; Gunasekara & Gerts, 2017; Huyen, 2017; Kinay & Bagceci, 2016; Koh, 2017; Koh et al, 2019; Nguyen & Phan, 2020; Villarroel et al, 2018; Dung & Ha, 2019; Woolfolk, 2017). There are basic differences in explanations of authentic assessment. While some academics view it as multifaceted, group-based, and reflective of real-world difficulties (Frey et al., 2012), others view it as a means of developing multiple intelligences in contrast to traditional assessment, which places limited emphasis on methodologies (Koh, 2017). Authentic evaluation can be seen as a means of revealing learners' abilities from many angles. When an assessment evaluates work that has value or utility outside of the classroom, it is deemed legitimate (Gerts & Gunasekara, 2017).

Letina (2015) explains how genuine assessment combines learners' competencies with content to support lifelong learning. It is further argued that authentic assessment, rather than merely replicating information learned from others, aims to develop learners' acquisition and utilization of multiple competencies as well as knowledge, skills, and attitudes applicable in society (Nkhoma, Nkhoma, Thomas & Le, 2020). Therefore, authentic assessment is construed by Dung and Ha (2019) as a means of measuring what is real, actual, or a true experience rather than a subpar substitute. For Brown (2019), assessment takes the form of asking learners to complete tasks that demonstrate how important information and abilities are applied in the actual world. On the other hand, Huyen (2017) observes authentic assessment as encompassing a broad range of alternative assessment techniques that seek to gauge learners' abilities and competencies in real-world contexts, suggesting a more organic real-world environment.

Being real does not always imply that the tasks should be completed in a real-world scenario; rather, they should reflect real-world practical problems that are carried out in a classroom (Frey

et al., 2012). Huyen (2017) also weighs in, stating that no circumstance can allow for evaluation to be completely authentic, whether it be used in a professional or academic setting. Instead, what counts is how closely the work is tied to a real situation. Since Huyen's definition encompasses all different approaches that aim to enhance learners' higher-order thinking and problem-solving abilities, it may be regarded as all-encompassing because it does not single out any particular approach. Since authentic assessment is a widespread occurrence that emphasizes learners' thorough participation in projects and product creation rather than only the testing component, it is regarded as an alternative assessment approach (Surya & Aman, 2016). It is important to evaluate learners from a variety of angles.

2.4.1 Authentic assessment as a form of alternative assessment

Alternative assessment is a term used to describe assessment methods that go beyond traditional paper and pencil tests and exams used for grading purposes only (Lopez-Pastor et al., 2013). Authentic assessment is referred to as an alternative assessment by Brown (2019) because it is seen as an alternative to objective-type tests. Authentic assessment is one form of alternative assessment, along with assessment for learning, evaluation based on performance, and the use of rubrics as assessment criteria (Huyen, 2017; Lopez-Pastor et al., 2013). Mohamed and Lebar (2017) examine alternative assessment as a form of assessment that encourages problem-solving by requiring learners to reason and justify their answers or products. Therefore, one kind of alternative evaluation that links learners' competencies with academic learning is authentic assessment (Letina, 2015; Koh, 2017).

Alternative assessments are those that actively involve learners in addressing problems by utilizing both new and old information, knowledge, and abilities (Lopez-Pastor et al., 2013). The study contends that the complexity of all alternative assessment methods stems from the time, money, and experience teachers must devote to developing meaningful activities that may be successfully used to enhance instruction and learning outcomes. This is consistent with research that underscores the need for competent teachers to effectively apply alternative assessments (Lopez-Pastor et al., 2013). Furthermore, Dung and Ha (2019) classify alternative assessment as criterion-referenced assessment, which compares individual performance against predetermined learning objectives or performance standards, instead of comparing learners' performance locally or nationally. This approach aligns with the goals of authentic assessment, which seeks to evaluate

learners' performance against predetermined standards rather than comparing their performance with that of their peers. Overall, alternative assessment provides a conceptual framework for performance-based assessment, with authentic assessment being the most recent and highly recommended form (Dung & Ha, 2019).

The focus of this discussion is on authentic assessment, given its importance in instructing and acquiring knowledge.

According to Surya and Aman (2016), AA gauges the competencies of learners by offering comprehensive practices of learners' capacities in the teaching and learning processes to generate products. Huyen (2017) contends that rather than drawing judgments about learners' achievement levels, authentic assessment is a more useful tool for determining their requirements and fostering their development. She also recommends that teachers should use authentic assessment to inspect learners' knowledge and motivate them to put what they have learned into practice in their own lives. Koh (2017) notes that authentic assessment is a powerful tool that guarantees fair learning opportunities and results for every learner. Further, Nguyen and Phan (2020) argue that learners who participate in authentic assessment are less worried about their final grades since they have a variety of enjoyable ways to convey what they have learned. As a result, we could explore authentic evaluation as strengthening learners' independence in directing their education. According to Brown (2019), genuine assessment captures the constructive aspect of learning, which is concerned with learners creating their meanings of the world and applying the knowledge they have gathered, as opposed to simply delivering the information they have been given. Brown (2019) expands that authentic assessment offers a variety of ways for learners to exhibit their learning. This suggests that learners are given flexibility in how they present what they have learned, considering a range of viewpoints and competencies.

On the controversy, authentic assessment is difficult to grade since it is subjective and involves many responses from many viewpoints (Walden, 2014; Koh, 2017). For this reason, a rubric is recommended as an evaluative instrument to help in this respect, but it takes time to create. As a result, authentic assessment methods are emphasised by Walden (2014), Sangia (2014), Aliningsih and Sofwan (2015) as needing the longest duration. However, this is the time that is an extremely scarce resource in classrooms. Similarly, alternative evaluations require skilled teachers to help learners communicate their conceptual knowledge rather than just memorizing facts (Letina,

2015). Furthermore, because learners encounter multiple significant real worlds, Gunasekara and Gerts (2017) claim that AA is contested, complex, and tinged with value judgments about what constitutes persuasive evidence in the real world. However, Frey et al. (2012) point out that identifying the goals of assessments that are not authentic—such as traditional assessment—is a better method of understanding authentic assessment. An explanation of how authentic evaluation differs from traditional assessment is provided below.

2.4.2 Authentic assessment vs traditional assessment

In contrast to traditional assessment, which is characterised by more testing that does not account for thoughtful responses or judgment of one's work (Huyen, 2017), authentic assessment is thought to provide teachers with an opportunity to measure learners' strengths and weaknesses in a variety of areas and situations because it is contextualised and developed over time (Mohamed & Lebar, 2017). Paper and pencil assessment emphasizes what learners know and is hence focused on measuring knowledge, according to Mohamed and Lebar (2017), whereas AA is more interested in what learners can do as well as what they know. As a result, using traditional means of assessment limits peer and self-assessment.

Old-style-----Reliable

Picking reply-----Executing a duty

Artificial-----Realistic

Recollection/Acknowledgement-----Creation/Submission

Instructor-designed-----Learner-designed

Circuitous confirmation -----Straight confirmation

(Mueller, 2018)

Frey et al. (2012), however, contend that conventional evaluation, as mentioned in Chapter 1, may not be viewed as inauthentic but rather as less direct and significant to learners. They show that higher-order thinking is not always considered when evaluating performances in traditional ways. As a result, the paper-and-pencil method is willing to frequently fall short in evaluating higher-order cognitive skills such as problem-solving and thinking (Rousseau, 2018). While the majority

of researchers notice that genuine assessment primarily takes into account higher-order thinking abilities when evaluating learners (Koh, 2017; Gunasekara & Gerts, 2017; Mohamed & Lebar, 2017), critical thought is mostly seen as being directly tied to what can be put into practice. We could therefore consider critical thinking to be relevant to elementary school learners. For instance, in the arts and entrepreneurship, learners are expected to create products that are both marketable and in great demand in their local communities.

Despite their differences, these evaluation techniques work well together (Mueller, 2018). Since authentic assessment and traditional assessment are complementary, both formative and summative assessments should be equated when it comes to the efficient and successful use of authentic assessment in the teaching and learning process. Mueller (2018) contends that in the process of authentic assessment, traditional assessment (TA) shouldn't be isolated. He highlights the necessity of completing the two assessment procedures, using the example that learners are taught how to accomplish the things they are studying in school, not simply about them. We can give a typical example related to the study, which is that teachers should know how to do (practice) as well as conceptually know about teaching and assessment. Thus, it is evident that AA and TA play important roles in the field of teaching and learning, for which teachers, acting as implementers, must possess the necessary skills. Hence, the purpose of the study is to investigate how teachers might use authentic assessment in their instruction, where AA and TA support one another.

2.4.3 Rubric as Authentic Assessment Approach

As mentioned in the last chapter, rubrics are criteria for evaluating AA assignments, and teachers should be well-versed in them to make effective use of them in their instruction. According to Nkhoma et al. (2020), a rubric is an assessment tool that provides a full description of desired understanding levels together with a scoring strategy for various performance types. They are perceived as occurrences that assign performance ratings to learners. Rubrics, however, are also proposed to improve validity and reliability, standardize assessment by reducing subjectivity in authentic assessment, improve learning, and make teaching easier (Nkhoma et al, 2020). Thus, boosting self-efficacy, decreasing anxiety, facilitating feedback, raising transparency, and providing assistance for learners' self-regulation (Brookhart, 2018; Vasileiadou & Karadimitriou, 2021). As a result, they recommended that rubrics be written in an approachable language for

learners. After all, learners use rubrics to communicate learning objectives and receive focused feedback, which makes them valuable when learners are involved in their creation.

According to Frey et al. (2012) and Nkhoma et al. (2020), creating rubrics should involve both professors and learners to boost learners' sense of responsibility and dedication to the assignment. Additionally, Nkhoma et al. (2020) and Vasileiadou and Karadimitriou (2021) demonstrate how tabular forms of rubrics that depict quality levels to aid in concept judgment can be created using quality terms, quantity numbers, or thorough descriptions. Because of this, rubrics are said to be made up of criteria and adjectives that show different performance levels, ranging from low to high (Brookhart, 2018). Nkhoma et al. (2020) and Brookhart (2018) both point out that rubrics can be used to evaluate literary works (essays) and Mathematical problem-solving. According to Vasileiadou and Karadimitriou (2021), rubrics are self-assessment tools that give learners criteria dimensions and descriptions for each level, illustrating the requirements of a task that is given to them. This enables learners to reflect on and evaluate the caliber of their work. According to Ortega and Minchala (2017), teachers gain from rubrics because they increase their awareness of important criteria throughout instructional activities. The purpose of the study is to investigate how primary educators evaluate AA activities in subjects including English language, Creativity and Entrepreneurship using rubrics as criteria.

2.4.4 Authentic assessment methods

2.4.4.1 *Self-assessment for assessment of attitude*

According to Kapsalls et al. (2019), self-assessment refers to a learner's capacity to appraise their progress and the significance of a task completed. They go on to say that learning is self-regulated since learners are responsible for keeping track of and assessing their learning objectives and results based on performance standards. Through the development of problem-solving and metacognitive skills, this assessment approach seeks to determine the strengths and limitations of a learner (AL-Shehri, Otoum & ALMagableh, 2015). It is thought of as a means of involving learners in a way that allows them to oversee and manage their education, encouraging them to actively engage by self-evaluating as they go along (Vasileiadou & Karadimitriou, 2021). For learners to enhance their work, they further urge that they complete these tasks based on explicit criteria, since doing so encourages them to critique their work. According to Papanthymou and Darra (2019), one of the most crucial abilities for preparing learners for lifetime learning and future professional growth is self-assessment. Schools must equip learners with the knowledge and skills

they will need in the future. Therefore, it is also known as inner practice, and it aims to make an evaluation process more learner-centered by encouraging goal-setting and work criticism, which increases learning motivation and improves understanding (Papanthymou & Darra, 2019). Therefore, motivated learners may adopt a positive outlook on learning.

2.4.4.2 Peer assessment for facilitating learners' autonomy in their learning.

According to Kapsalls et al. (2019), peer assessment is a two-way assessment process in which learners provide feedback on each other's work. Additionally, feedback can be formative or summative, descriptive or include grades, and it can help learners perform better as their strengths and faults are noted. According to Double, McGrane, and Hopfenbeck (2020), it is therefore recognised as a strategy that enhances academic achievement through efficient feedback delivery to learners. Feedback is used about the actual content or information exchange between learners, whether through written comments, grading, or verbal communication. They refer to it as a vital component of educational practice, critical to learners' learning and growth. Therefore, peer assessment is important for learning, according to Sun, Harris, Walther, and Baiocchi (2015). It is especially helpful in large classes where it is difficult to provide individualised feedback, but it is also recommended in lower class sizes because it improves learning and relieves teacher workloads. Lesotho is one of the countries where teachers are overworked, especially in primary schools, which is noteworthy for the study under consideration. Accordingly, Double et al. (2020) define peer evaluation as an individual at comparable educational levels since it entails evaluating or being evaluated by peers and necessitates written or spoken contact. Furthermore, peer evaluation is recognised as an efficient and affordable teaching method in addition to offering prompt feedback and helping to manage large courses (Sun et al., 2015). That is why Panadero, Brown, and Courtney (2014) emphasize that peer evaluation promotes good relationships and socialising among learners. According to Singh et al. (2017), peer evaluation can happen in groups or in pairs.

2.4.4.3 Groupwork for collaborative learning

Mentz and Lube (2021) define the grouping technique as an integrated approach to assessment and learning that includes feedback. According to Sridharan & Mustard (2015), group work is an approach that requires learners to collaborate to complete assignments by exchanging knowledge with peers. Group work is therefore considered essential for the development of specific

knowledge and collaborative abilities (Sridharan & Mustard, 2015). Furthermore, group work is defined by Weldeana and Sbhatu (2017) as an environment in which all learners participate, which facilitates and completes the gathering of authentic assessment data. This is because group work yields authentic learner progress data through observation. They also claim that group work reduces the amount of resources needed for assessment while giving teachers and learners access to more information than in other educational contexts. This is because, as was previously indicated, AA demands the greatest resources to complete. In addition, Woolfolk (2016) highlights how knowledge is organized through questions and explanations, which facilitates mental information processing. Furthermore, it is claimed to help teachers with their workload by giving them honest comments on the strengths and weaknesses of learners based on their summarized work (Weldeana & Sbhatu, 2017).

2.4.4.4 Project assessment to develop learners' skills

Projects are a happy component of work that entails inquiry-based tasks, and they ought to communicate the outcomes in a way that makes them easy to comprehend (Sridharan & Mustard, 2016). They state that the project plan needs to show self-management abilities including organising, managing time, and finishing tasks on schedule. Sridharan and Mustard (2015) go on to say that projects are either reports or artifacts, and that legible written reports that promote clear and effective communication are necessary. As a result, projects are seen as methods for skill evaluation, which is the application of learners' knowledge in practical settings using competencies and indicators (Surya & Aman, 2016). According to Sambeka, Nahadi, and Sriyati (2017), projects are a procedure that forces teachers to change from a teacher-centered approach to a learnercentered one. This approach is said to aid in the development of learners' skills and capacities. Furthermore, projects are seen by Ghaicha (2016) as a performance-based approach of assessment that boosts learner and instructor motivation.

According to Sambeka et al. (2017), project-based learning involves learners working in groups to solve authentic problems—those that are related to real-world activities—which aids in the collection of information from a variety of sources and gives their learning significance because the activities are linked to real-world events. Furthermore, they maintain that a teacher should facilitate the entire process. As a result, projects assist educators in identifying the ideas that learners develop to produce novel, creative, and useful goods (Sambeka et al., 2017). Projects are

assignment assessments that can be finished after a specific amount of time, as stated by Surya and Aman (2016). This suggests that to help learners get ready for product manufacturing, initiatives need to be planned. Therefore, the study's goal is to find out how teachers use authentic assessment to grade learners in AE, a project-based learning area that is primarily used in primary schools.

2.4.4.5 Performance-based assessment to assess knowledge and skills

It appears that different researchers hold different opinions about performance assessment; some believe it to be the same as authentic assessment, while others disagree. Mueller (2018) offers three additional terms for authentic assessment: performance-based, direct, and alternative assessment. These terms stem from the requirement that learners should complete meaningful activities. According to Koh (2017), however, all authentic evaluations are performance-based since they necessitate lengthy answers from learners, performance on a task, and product creation. Furthermore, it is emphasised that these two phrases be used interchangeably because it is possible that learners will not be asked to complete work that is not real (Mueller, 2018).

However, Huyen (2017) points out in exception, a point that authentic assessment attempts to gauge learners' abilities in real-world scenarios—a more natural real world, as was previously indicated. This is emphasised to set it apart from performance assessment, which concentrates on the performance of learners, as it concentrates on the context in which performance is delivered (Huyen, 2017). Thus, we may consider performance evaluation to be a component of AA. In support, Frey et al. (2012) point out that performance assessment and authentic assessment can be distinguished because, while performance assessment enables the demonstration of skills required for success beyond schooling and the establishment of products or solutions, it does not truly reflect the real world.

Additionally, it is mentioned that while genuine evaluations are recognised as performance evaluations, the opposite may not always be true (Frey et al, 2012). Therefore, it is insisted upon by Frey et al. (2012) and Ghaicha (2016) that not all performance-based assessments fall under the purview of authentic assessments. Performance assessment is therefore regarded by the majority of studies as a genuine assessment approach (Refnaldi, Zaim and Moria (2017); Brown, 2019; Haidari & Karakus, 2019; Moqbel, 2020; Nguyen & Phan, 2020); Alingsih & Sofwan, 2015; Dung & Ha, 2019). Because performance evaluation appears to play a part in authentic assessment

practices, although a limited one, it will be regarded as an authentic assessment method for this study.

As a result, we could view performance assessment as the process that underpins genuine assessment and helps evaluate learners' performance. In response to criticism of previous assessments that tested memory, performance assessment is thought to have emerged as an alternative assessment tool to assist learners in applying skills learned in real life, including clear presentation (AL-Shehri, Otoum & AL-Magableh, 2015). As a result, performance evaluation is used to gauge the knowledge and abilities that learners have learned as well as their ability to apply judgment and comprehend concepts (Surya & Aman, 2016). Performance-based evaluation, according to Mohamed and Lebar (2017), is centered on how well learners demonstrate and quantify their abilities under specific conditions. Accordingly, it is defined as the process of obtaining information about one's performance through methodical observation to inform decisions (Dung & Ha, 2019). It also allegedly includes items, portfolios, displays, and demonstrations (Ghaicha, 2016). According to Dung and Ha (2019), a genuine assessment includes both performance evaluation and portfolio components. The portfolio is the next important consideration in this respect.

2.4.4.6 Portfolio as an effective authentic assessment tool for performance mastery

A portfolio has long been used as a tool in the educational process to collect learner work, including written, audio, and video records. Huyen (2017). According to Ardianti and Mauludin (2017), Dung and Ha (2019), and Huyen (2017), a portfolio is an assortment of learner work that has been gathered over time by both the teacher and the learner, demonstrating ongoing work throughout time. On the other hand, Syafei, Mujiyanto, Juliasri, and Prantama (2021) measure the effectiveness of learning objectives by compiling learners' work, learning progress, and academic performance in a methodical manner. According to Welteana and Sbhatu (2017), it is hypothesised to include a significant collection of artifacts, problem-solving diagrams, reports, and project photos; additionally, it is said to include learners' completion of assessment tasks, reports (written or oral), creative goods, group projects, and learner writing, such as written assignments, poems, and essays (Dung & Ha, 2019). Dung and Ha (2019) observe that both the teacher and the learners should choose what should be retained in the portfolio. Woolfolk (2017, p. 606) emphasises that portfolio creation guidelines should involve learners in selecting the pieces that comprise their portfolios. Throughout the learning process, learners may be asked to select pieces that meet

specific requirements, such as "my most challenging problem," "my best work," or "my improved work." While learners should be asked to select pieces for their final submission that demonstrate their level of learning, the instructor should ensure that the learners' works demonstrate self-reflection and selfcriticism (Woolfolk, 2017).

A portfolio is an assessment tool that gives sufficient details regarding the performance and learning growth of pupils (Ardianti & Mauludin, 2017). However, it is claimed to be more than just a scrapbook, which contains all of the learners' work and involves a range of work at different stages, since it is meant to give teachers diagnostic data that helps learners become more successful, critical thinkers, and self-aware (Huyen, 2017). According to Frey et al. (2012) and Mokhtaria (2015), a portfolio serves as a tool for selfevaluation and self-reflection where learners take ownership of their work, develop critical and creative thinking, problem-solving, and decision-making skills. However, according to Hodgman (2014), it gives learners the self-respect they want and empowers them. In a similar vein, it is said to encourage learners' participation in the classroom by requiring them to exhibit their development (Mokhtaria, 2015), which improves their learning, inventiveness, and self-assurance (Hodgman, 2014).

According to Mak and Wong (2017), portfolio assessment is widely recognised as a helpful technique for fostering learning through assessment. Additionally, they see it as an empowering exercise that helps pupils discover how to learn on their own. Lestariani, Sujadi, and Pramudya (2018), however, maintain that the portfolio assessment is an integral part of authentic assessment because it measures learners' capabilities rather than what they already know. Portfolios are seen to be crucial in helping learners develop into lifelong learners by allowing them to track their progress throughout their education (Mokhtaria, 2015). Additionally, he notes that it helps learners become more reflective as their learning processes are carried out by assessing not just the learners' knowledge but also the depth of their understanding to apply such information under different conditions.

According to Mokhtaria (2015), the reflective skill requires a high degree of application of cognitive abilities, including problem-solving, critical and creative thinking, and decisionmaking, which includes the ability to articulate thoughts and feelings. The teacher must provide opportunities for practice in these areas. A portfolio is one of the many alternative authentic assessments that instructors are advised to employ in schools, according to some. When combined

with the integrated curriculum, it is thought to address issues with the traditional paper-and-pencil technique (Syafei et al., 2021). Resultantly, Dung and Ha's (2019) content portfolio are a response to the complex nature of language, producing learners who are anxiety-free when it comes to time-constrained examinations and exams, raising their motivation levels, and improving language proficiency—especially in writing. Portfolio projects are essential in helping learners' composition writing (Syafei et al., 2021). In contrast to grading, portfolios are seen as a tool for stakeholder communication since they provide a significant display of learners' learning and comprehension (Wedeanan & Sbhatu, 2017). For this reason, portfolios are seen as useful substitute assessment techniques for educators of all stripes (Dung & Ha, 2019).

Conversely, teachers and principals have expressed concern about the time factor, arguing that it is labor-intensive, reduces comparability, and creates difficulties in ensuring standardized testing conditions because learners respond from different perspectives derived from multiple sources, depending on how they defend their work (Mokhtaria, 2015). Additionally, it is costly and necessitates additional work that takes up the most time (Syafei et al., 2021). Time consumption is often mentioned as a barrier, and it has been discovered that choosing the right resources for a portfolio review might be challenging (Lestariani et al., 2018). However, Dung and Ha (2019) pinpoint the most prevalent shortcomings associated with portfolios as being related to design choices, logistics, interpretation, validity, and reliability.

2.5 IMPLEMENTATION OF AUTHENTIC ASSESSMENT

2.5.1 Teachers' understanding of authentic assessment in curriculum delivery at the primary school level.

In a qualitative study conducted in the United States, teachers and learners in the third grade participated in interviews to learn more about their perspectives on assessment. The results indicate that instructors primarily saw assessment as a means of making improvements (Monteiro, Mata, & Santos, 2021). Nonetheless, it seemed that most teachers employed observation without recording; during practice sessions, the teacher would verify learners' replies while providing feedback that was task-specific and centered on the process (Monteiro et al., 2021). According to the study, teachers employed formative assessment with a small group of learners and lacked the knowledge and techniques necessary to use it to help learners meet their learning objectives. Likewise, an exploratory and descriptive study conducted in the United States revealed that teachers favored summative methods for assessing learners' development (DuqueAquilair, 2021).

On the other hand, according to a survey study that examined US classroom instructors' methods, teachers placed a high importance on assessment, meaning that pupils would likely experience a fair interpretation of these methods (Deluca, Rickey, and Coombs, 2021). According to the study, instructors seem to use learner assessment methods and teacher-controlled evaluation equally, which is supported by authentic assessment, which was conducted with Lesotho primary school teachers for the study.

According to Kadhim's (2020) research, teachers in America tended to use evaluation for learning and assessment of learning interchangeably. A qualitative study by Monteiro et al. (2021) in Portugal stated how learning and teaching improved in terms of feedback and learners' accountability for formative assessment. The study does show, however, that teachers hardly ever used written feedback at the process level, where they assigned grades that concealed learners' requirements. Given that the majority of the assessment questions were low cognitive levels, this suggests a misalignment between the conceptions of the teachers and their methods of instruction (Monteiro et al., 2021). Therefore, it is possible that we missed some domains in our observation. This is consistent with authentic assessment advocacy, which calls on teachers to incorporate all domains within their assessment methods.

Learners profited from the use of authentic assessment in the instructional framework, according to Ardianti and Mauludin's (2017) study, as they became aware of reading interest and development stages. We could thus see that learners were in charge of their learning because of their motivation. Letina (2015) conducted a quantitative study with primary school teachers in Zagreb, Europe, and found that while they saw alternative assessment as giving pupils more responsibility, there was a mismatch because they did not apply it enough in their science and social studies classes. The two studies highlight the important role that genuine assessment plays in supporting learning. In light of these findings, the current study aims to investigate how teachers employ AA in their teaching of mathematics, English language, and CE while keeping an eye on the results.

Yet, a qualitative study conducted in Malaysia reveals that even though highly skilled educators were well-versed in AA and used a variety of techniques for providing and receiving feedback in the classroom, they were beset by difficulties like a dearth of administrative support at the school and an excessive amount of paperwork (Aziz et al., 2020). Except for one study that found teachers

were not prepared, a meta-analysis and a secondary study conducted in Malaysia by Rosli, Mokhsein, and Suppian (2022) indicate that teachers in all of the studies were prepared to implement classroom assessment, which is regarded as both formative and summative assessment. As a result, they determined that the reason for the study's lack of preparation was the professors' insufficient subject-matter expertise, and the feedback was also not sufficiently delivered.

The next quantitative investigation by AL-Shehri et al. (2015) in Saudi Arabia's first, second, and third intermediate grades revealed a high degree of availability and practice of authentic assessment competencies. This could suggest that educators were aware of how to apply authentic evaluation. While in Europe, Rhodes, Greece, Papanthymou and Darra (2019) conducted a literature review and analyzed 28 publications about primary and secondary education as well as inclusive education. The study's findings revealed that learner-centered pedagogy—a crucial component of self-assessment—had attained 63%, and reflection—an additional component of self-assessment—had attained 58%, feedback—21%, and formative assessment—16%. This suggests that learner-centered pedagogy frequently won out in elementary and secondary education, followed by formative assessment receiving less emphasis and reflection, learning orientation, control, monitoring, feedback, and cooperation. It is thus seen that while the aspects of learner-centered pedagogy, reflection, and orientation were widely mentioned, quality learning and formative assessment are not reported in definitions (Papanthymou & Darra, 2019). As a result, we may conclude that there is still more work to be done to establish authentic assessment and enhance the use of formative assessment.

Nkhoma et al. (2020) conducted a thorough literature review in the UK and found that while rubrics are acknowledged as criteria to improve the use of authentic assessment in the teaching and learning domain by supporting teachers in developing strategies and enhancing the validity and reliability of assessments, their use is said to exacerbate rather than resolve issues. Ibid, teachers were still unnoticeable when it came to using rubrics as a teaching and assessment tool, especially when it came to writing classes. This may indicate that instructors are not effectively using real assessment in the delivery of curriculum, necessitating more study on how teachers use rubrics for teaching and evaluating the interim curriculum, where rubrics should be useful in elementary schools. Similarly, a mixed-method study conducted in Uganda by Mitana, Muwagga, and

Seempala (2018) found that teachers shied away from providing learning opportunities that were difficult to measure or that were not required for the end-of-year exams. In view of this, there is a good chance that educators have not used rubrics to provide content. The purpose of the study is to see how educators use this phenomenon to teach and evaluate learners' work, especially when it comes to essays written in the English language. This is because some subjects are covered in the curriculum but are not included in the final exam, as is the case in Lesotho, which is comparable to Uganda. In Indonesia, the mixed-method studies by Aliningsih and Sofwan (2015) with high school teachers and the qualitative study by Ekawati (2017) with primary and secondary teachers viewed AA as a measure of quality in the teaching and learning processes, with the understanding that it requires knowledge and skills from real-life situations through interactions. Correspondingly, using AA gives enough information on learners' competency. It is also understood that AA assists both the instructor and the learner in identifying their strengths and limitations so they may come up with solutions and enhance their practices (Ekawati, 2017). However, according to the study, teachers are unclear about how to score, what kind of AA method to use, and how to create evaluation criteria. It was also reported that teachers were found to use materials inappropriately during instruction and to evaluate productive (active) abilities in the same manner as receptive (passive) skills. In a qualitative study conducted in 2017, Suarimbawa et al. examined grade 7 Indonesian teachers using documents, observation, and interviews. The lesson plans were reviewed, and the results revealed that teachers' lack of experience with large classes and time constraints made it difficult to facilitate assessment. Accordingly, it is recommended that educators collaborate to share ideas and figure out how to inspire learners by assigning them additional work (Suarimbawa et al., 2017). In light of this, the research by Suarimbawa et al. can be trusted to reveal the planning aspect through document analysis, suggesting the importance of various data collection methods in terms of employability. In contrast, the studies by Aliningsih and Sofwan (2015) and Ekawati (2017) excluded the planning aspect because they relied solely on interviews. To obtain more accurate information, the current study intends to employ a variety of data collection techniques.

Moving on to African nations, descriptive survey research conducted in Ghana by Arhin, Yanny, Kwakye, Abaidoo, and Opoku (2021) reports that conventional assessment, which stresses elements that will not benefit pupils outside of the classroom, dominates the educational system.

The study concludes that since AA focuses on problem-solving and evaluates learners holistically by taking into account all domains, it was necessary to address the criticism that assessment should be designed to advance learning and teaching (cognitive, affective, and psychomotor).

Although they reported that it raised paperwork and demanded more of their time, teachers in Ghana are known to have a positive impression of AA, which they implemented at a basic level (Arhin et al., 2021). However, learners in the experimental group outperformed learners in the control group in Arhin's (2015) experimental study project, which examined the impact of performance-driven instruction on learners' attitudes toward mathematics. This might be seen as suggesting that using AA can improve learners' academic performance. Additionally, instructors said in a descriptive case study on their perceptions of the use of authentic assessment methods that the policies, time, resources, and assessment techniques used in their schools limit the use of authentic assessment (Kankam, Bordoh, Ishun, Bassaw, & Korang, 2015). Even though the Kankam et al. study was conducted in a high school, the problems it identified are similar to those found in the majority of studies conducted in primary schools. These include resistance brought on by a lack of time, policies that aren't prescribed well enough, a lack of resources, and ignorance of AA methods and how to apply them effectively. Therefore, we may say that the problems mentioned above make it difficult for teachers to use AA in their curriculum delivery.

Formative evaluation was used in opposition to exams predominant role, according to a qualitative study conducted in South Africa by Kanjee (2020). Thus, it is observed that few teachers were able to demonstrate the effective use of any specific method in engaging pedagogical formative assessment practices, indicating the difficulty teachers face in implementing formative assessment (Kanjee, 2020). While it is still important for primary school teachers to evaluate their learners' skill levels, formative assessment—which is designed to help learners get ready for the workforce—is rarely used by educators in South Africa; instead, they primarily use summative assessments as a means of preparing learners for exams (Chavalala, 2015).

Additionally, a qualitative study conducted in South Africa by Govender (2020) notes that teachers' limited comprehension of formative assessment and curriculum submission contributes to their insufficient use of formative assessment practices. The study goes on to say that even while

instructors are aware of formative assessment, they are unable to properly implement it because they lack understanding of how learners learn and participate in Mathematics. Despite having received training, teachers applied some techniques as stand-alone tools and were unable to apply the combination of techniques that define formative assessment (Govender, 2020). As well, Sethusha (2012) argues in a qualitative study conducted in South Africa that the primary obstacles to teachers' assessment practices in the classroom are the interpretation of policies, overcrowding, parental involvement, support, moderation mechanisms, assessment planning (internal and external), implementation, and communication, all of which are hampered by a lack of funding.

In the words of Okoye (2014), teaching and learning methods without appropriate and genuine assessment are highly valued in African nations. According to Okoye (2014), authentic assessment is considered the gold standard for high productivity in the teaching and learning domain in Nigeria, where it offers opportunities for both teachers and learners to develop. Furthermore, an experimental study conducted in 2019 by Oriheruata and Oyakhirome found that consistent use of formative assessment improves learner performance by encouraging deeper comprehension of the material through the provision of insightful feedback. As a consequence, the study recommends that learning assessments be prioritised as they improve learners' ability to think critically compared to those who do not participate in them. As a result, according to Oriheruata and Oyakhirome's (2019) study, learners in the experimental group outperformed learners in the control group (mean score, 43.64), who did not participate in formative assessment techniques. The experimental group's learners scored better.

From what we can see, developed nations like those in Europe and America successfully use authentic assessment, in contrast to developing nations like those in Africa. This is demonstrated by the fact that learning guides and models were created for teachers in developed nations to help them in comparison to those in developing nations. In a quantitative study conducted in Indonesia with eighth-grade learners, Moria et al. (2017) found that the creation of an authentic assessment model aids in the teaching and learning of English, especially writing, which is described as being simple, practical, understandable, and stimulating learners' interest in writing. The basic objective of this study, which is to improve learners' English writing skills, can still be applied to elementary school learners even if it was carried out with high school learners. This makes it important for my

project, which looks for models that Lesotho primary school teachers may use to help them teach English writing to their learners.

Refnaldi et al. (2017) conducted a quantitative study with Grade VII learners in Indonesia. The teachers' comments about their understanding of authentic assessment aligned with the definition of authentic assessment, with some mentioning the aspect of relatedness to real life. However, a qualitative study conducted in the same nation by Aisyah and Hikman (n.d.) revealed that elementary school teachers had been using authentic assessment in their lessons without realizing it because they saw it as a test that measured the final products of their learners' learning. These findings are comparable to a study conducted in the United States by Yao (2015), where teachers thought of assessment as a test. Thus, in addition to the study's interest in real assessment, these suggest the necessity for more research to explore instructors' comprehension of assessment techniques in their instruction and to support the development of their competence.

Furthermore, a mixed-method study by Mitana et al. (2018) revealed that lower primary assessment is inappropriate since it doesn't address learners' needs or curriculum standards. In addition, the study's analysis of a sample of assessment papers revealed that rather than requiring higher-order thinking abilities like critical thinking, creativity, and problem-solving to evaluate learners holistically, the majority of the questions only needed memorizing and recalling facts. This may be seen as concentrating on evaluating lowerorder cognitive skills at the expense of other emotive and psychomotor domains that ought to be included in AA practice. However, it was discovered that teachers lacked the motivation to facilitate assessment and reporting because of low teacher-pupil ratios, large class sizes, and a policy that required them to use past exam questions as teaching material rather than lesson plans and schemes of work (Mitana et al, 2018). Additionally, teachers were deemed incompetent to facilitate assessments and reports. Therefore, another component of the study that is being looked into is how teachers use preparation books to plan how to apply authentic assessment merged with their practices.

2.5.2 Teachers' application of authentic assessment methods

Group work has improved learners' reading comprehension, according to a qualitative study conducted in Indonesia by Ardianti and Mauludin (2017). Learners reported feeling more at ease

working in groups than presenting individually during class discussions. This suggests that instructors have a responsibility to do group work as part of their competencies to apply authentic evaluation for learners' progress. The study investigated how primary school teachers use these techniques. As learners' reading abilities steadily improved and their teachers saw that they could make sense of the material more than they had at the start of the course, performance assessment through social practices also had a positive impact (Ardianti and Mauludin, 2017). They also claim that by offering enough details about learners' performances and learning development, portfolios help learners attain academic success. Portfolios are used by Moria et al. (2018) and Refnaldi et al. (2017) to improve learners' writing abilities. As a result, they claim that learners who underwent portfolio evaluation outperformed those who had standard assessments in terms of writing improvement and test scores.

By contrast, Mitana et al. (2018) found that teachers used the paper-and-pencil form of evaluation, with oral assessments, projects, and portfolios having rare applicability. This is further supported by the quantitative study conducted in Jordan by Al-Zoubi (2019), which found that teachers used a moderate amount of authentic assessment tools and methods overall. Paper and pencil assessments were the most popular method, while other forms—such as performance-based, problem-solving, observation, peer assessment, and projects—were also moderately used. Suarimbawa et al. (2017) found that while portfolios and projects were absent from teachers' lesson plans, performance, and written assessments were the only ways to gauge learners' proficiency in English. As a result, teachers did not use these assessments in the teaching and learning process.

Nonetheless, research suggests that teachers utilised merely three genuine assessment techniques among numerous others in their instruction; projects and peer-to-peer evaluation were not included (Refnaldi et al, 2017). On the other hand, Sun et al. (2015) discovered that peer evaluation was used in a randomised controlled trial study conducted in California. They discovered that learners who took part in peer assessment during a particular unit outperformed those who did not in unit quizzes. The study also shows that learners performed better on the exam, suggesting that peer evaluation endures over time.

Furthermore, Double, McGrane, and Hopfenbeck (2020) discovered that the use of peer assessment had a favorable impact on academic achievement in primary, secondary, and tertiary

learners in their quantitative meta-analytic analysis of experimental and quasiexperimental studies conducted in England. They also suggest that, while the effects of peer and teacher assessments are similar, peer assessment is more successful than teacher assessment. Therefore, it is recommended that more studies be done to clarify the contextual and educational aspects that affect how successful peer assessment is (Double et al, 2019). Therefore, it is recommended that peer evaluation, given its critical role in reducing teacher workload and raising learner accomplishment, be used not only in large class settings but also in smaller ones Sun (2015) et al. Peer evaluation facilitation becomes especially important for this study because primary school traffic in Lesotho is quite heavy.

Additionally, according to Monteiro et al. (2021), teachers only brought up peer assessment in interviews; self-assessment was completely ignored. Investigating instructors' use of authentic assessment techniques is the goal of the current study. However, despite not realizing it, teachers used a variety of authentic assessment techniques, including peer assessment, self-evaluation, and observation, according to a study by Aisyah and Hikman (n.d.). This would imply that educators need more training regarding the phenomenon—a topic to be covered in the upcoming session. In a quantitative study conducted in Spain by Panadero et al. (2014), it was discovered that 38.8% of primary school teachers, 54.0% of secondary school teachers, and 7.2% of adult education teachers have employed learner self-assessment. These findings indicate that self-evaluation is not being applied adequately, which suggests the necessity for additional research similar to the current study, to examine how teachers can employ authentic assessment techniques. It should be emphasised that teachers choose to emphasise the benefits of employing learner self-assessment above the obstacles, which is why all of the difficulties in the survey were rejected because none of them were statistically significant (Panadero, et al., 2014). This could mean that instructors become more proficient as a result of their exposure to the phenomena. Nevertheless, they discuss that even if the majority of teachers had favorable experiences with learner selfevaluation, they are still said to have believed it to be unreliable.

Following reports, there has been a rise in learners' participation in assessments in Spain, Europe (Lopez-Pastor et al., 2013). In a similar vein, 90% of Spanish teachers in a survey study investigating their views regarding learner self-assessment at the primary, secondary, and tertiary

levels of the educational system reported having positive experiences (Panadero, Brown & Courtney, 2014). According to Panadero et al. (2014), the reasoning behind their belief that learners should engage in self-evaluation stems from their attendance in the classes, and they also mentioned that the assessment is used to determine the final course grade.

On the other hand, exceptional Malaysian teachers employed a variety of assessment techniques to monitor their learners' progress, including songs and quizzes along with peer and self-assessment practices. The latter involved learners checking off items on a checklist as they completed written assignments, although this process took some time for them to consider and complete (Aziz et al., 2020). The survey also shows that peer assessment was widely employed, with learners being asked to jot down their friends' strong aspects and suggestions for improvement while the teacher goes around to help. As a result, we can see how well these teachers apply AA techniques, serving as facilitators while AA advocates for learner autonomy over their work.

Nevertheless, Kanjee (2020) observed that even instructors who use interactive examinations do so for test-taking purposes, meaning that formative assessment techniques like questioning, self- and peer-evaluation, and feedback practices are used sparingly. In light of this, Okebola, Owolabi, and Onafowokan (2013) conducted a survey study in Nigeria and noted the necessity for appropriate employability of assessment methods to assess learners' reading. African children are known to struggle with reading, which is thought to be caused by teachers' inadequate efforts to engage learners in reading styles that spark their interest in reading. With regard to the findings of this study, teachers continue to read aloud to learners first, then the learners read aloud, and finally the teachers ask questions. This process appears ineffective because it doesn't increase the learners' desire to read.

Therefore, it is stated that instructors' ignorance of techniques for assessing learners' attitudes toward reading is the reason for the rise in the difficulty of reading (Okebola et al., 2013). This could suggest that educators do not consider every domain while using evaluation procedures. For example, research suggests that effective authentic assessment techniques are necessary for teaching English language learners since they promote skill development (Ekawati, 2017). The

abilities supported by genuine evaluation, the phenomenon being examined, which addresses each of the three domains where attitude is related.

Based on Bores-Garcia, Hortiguera-Alcala, Gonzalez-Calvo, and Barba-Martin's (2020) systematic review of articles published at all educational levels in Spain and the USA during the last five years (2016-2020), the use of peer assessment increased motivation, perceived competence and confidence in one's ability to teach, and teaching self-efficacy. The study's findings, however, also revealed a dearth of research on peer assessment, and they suggested that more studies on formative assessment be conducted to use peer assessment, especially in the context of primary and secondary schools. To this end, the university should get in touch with the schools to find out about any incidents that occur during the teaching and learning processes. The goal of this project is to learn more about how primary school instructors use real assessment techniques, such as peer evaluation. While the universities' efforts to learn about instructors' assessment methods are noteworthy for the study, the researchers' desire to learn about teachers' opinions regarding their training is also noteworthy. This brings us to the following theme.

2.5.3 Teachers' view of their training in applying authentic assessment.

After conducting a systematic review of the literature, Villarroel et al. (2018) found that teachers' reluctance to stray from formal assessment made it difficult to implement authentic assessment because it requires more time, effort, and teaching materials. This may suggest that teachers are first inadequately trained by institutions regarding AA for practical practice with learners in the field, resulting in an incapacity to apply this phenomenon. In the UK, Nkhoma et al. (2020) conducted a review of the literature and found that while rubrics can be useful tools for enhancing the effective application of authentic assessment, there are certain challenges associated with their design, including determining how best to use them to improve learning performance and the differing purposes that teachers and learners have for using them. Based on these findings, the authors propose that effective employability training should be provided for both parties. About 80% of elementary and secondary teachers had completed training in evaluation courses, according to Panadero et al. (2014). They do, however, suggest that these teachers did not appreciate other AA techniques, such as self-assessment, which suggests the necessity for additional training. In the work of Arhim (2015) and Arhin et al. (2021), it is therefore argued that in-service training

ought to be designed to provide instructors with tools like computer programs and to teach math teachers how to employ performance-driven education.

Furthermore, research shows that because AA is relatively new in Malaysian primary schools, most issues arise. Excellent instructors firmly stated that they need courses on authentic assessment and pedagogical training (Aziz et al., 2020). After discovering that elementary school teachers were unable to explain what authentic assessment meant, Aisyah and Hikman (n.d.) recommend that teachers take part in training on authentic assessment to become competent English teachers. Even though Al-Zoubi's (2019) quantitative study suggests that educators should take training classes on AA techniques and resources for teaching English, the study also shows that teachers who received training outperform those who did not.

According to Rosli et al. (2022), Malaysian instructors needed ongoing assistance to implement classroom assessments efficiently. In other words, to improve the use of AA, they needed training. Ozan (2019) applied authentic assessment to aspiring teachers through group work within AA techniques such as portfolio, performance assessment, self-evaluation, and peer applied in a mixed method study conducted in Turkey. Teachers were required to create examination items using a variety of formats, maintain a portfolio for the semester, turn in assignments for marks, and assess learners in groups and with peers using criteria-based rubrics (Ozan, 2019). He also demonstrates how educators maintained introspective journals to assess their work. After considering the information about aspiring teachers above, we can conclude that instructors who receive this kind of training will most likely be able to use AA effectively in the classroom once they start teaching. As stated by Ozan (2019), there is evidence that teachers had a positive perception of AA because it helped them improve their skills and gave them opportunities to practice in real-world situations. Additionally, a study conducted on primary school learners revealed that authentic-based tasks had a positive impact on their attitude towards life issues.

On the other hand, AL-Shehri et al. (2015) contend that teacher preparation courses ought to be offered to enhance their capacity to use real evaluation. Similarly, a study conducted by Mitana et al. (2018) found that although teachers were taught certain aspects of measurement and assessment

during their training, these were still lacking. This could mean that even when teachers have completed course training, they still need to attend refresher courses. However, a qualitative study conducted in 2016 by Muhlauli and Kgosiadiwala in Botswana with in-service primary school teachers revealed that all 74 learners assessed through portfolios gained competence and were highly motivated because they believed portfolios were important for developing a variety of skills. As a result, they expressed a desire to implement this with their learners in the classroom. Therefore, the purpose of the study was to find out if Lesotho primary school teachers received the necessary instruction in authentic assessment techniques.

2.5.4 Ways teachers can use authentic assessment in their teaching.

To create formative authentic assessment tools based on learning trajectory-based research that is appropriate for grade 4 in elementary school, a mixed method study was conducted in Ngwan Regency. A model was followed for the developmental process to investigate how teachers use authentic assessment (Surya & Aman, 2016). Under needs analysis, the study's findings point to the necessity for formative genuine assessment instruments in primary schools that are based on learning trajectories since these instruments typically give feedback to learners' learning outcomes so they may identify their strengths and weaknesses. Learning trajectory, according to Surya & Aman (2016), is concerned with the learning idea, which talks about the learning plot components that learners acquire, and the learning plot, which is about identifying the needs of learners. According to standard criteria for instruments evaluating formative and summative assessments, validity and reliability, learning trajectory AA instruments are shown to be appropriate and effective (Surya & Aman, 2016). As a result, Ortega and Minchala (2017) also recommend that teachers use a variety of assessment techniques to guarantee the validity and reliability of L2 classroom assessments so that learners can make wellinformed decisions. According to Surya and Aman (2016), reliability is the consistency of the measured outcomes, whereas validity is used to instruments that can measure what should be assessed. They claim that to determine learners' actual learning needs, a hypothetical learning plot is used to determine the learning trajectory.

Accordingly, the teaching objective, learning objective, and learners' progress are considered to be the three components of the hypothetical plot (Surya & Aman, 2016). While they outline the preliminary steps for conducting authentic assessments, they also point out the necessity for instruments that can evaluate learners' competencies in any setting. As a result, indicators should

be developed to determine learners' needs, taking into account the following steps: identifying learning objectives, pre-assessing learners, giving pertinent instruction, and evaluating the desired learning outcome. But research indicates that teachers have a poorer understanding of authentic assessment, and they struggle to use government-recommended learning tools because they fail to take learners' learning plots into account (which makes them assess using assumptions and guesswork and rely on textbook items), (Surya & Aman, 2016). Additional findings on product development assessment tools center on attitude, knowledge (essays), and skill evaluation that employs project and product methods, as suggested by the recommendation that, for curriculum 2013, knowledge, attitude, and skill should be assessed through the use of AA (Surya & Aman, 2016). To improve learning outcomes and self-regulation, they suggest that teachers fulfill their responsibility by incorporating learners in the formative assessment process through the use of peer and self-evaluation in their instruction.

However, formative assessment should be organized, according to a qualitative study by van der Steen et al. (2022). For this reason, a set of formative assessment design principles was created to assist teachers in organising formative activities. As a result, they maintain that for formative assessment activities to be effective, they must be designed alongside other curriculum elements and the decisions that teachers hope to make as a result of these activities. Then, when creating formative assessments, teachers are recommended to start with lesson plans and learning objectives (van der Steen et al, 2022). Lesson plans assist teachers in incorporating formative assessment activities into the teaching processes as evidence of learning to inform teaching, and they further urged the start to be from learning objectives to ensure that learner learning is perceived in the learning process to general learning objectives instead of concentrating on right or incorrect responses. Furthermore, in a qualitative study on the effectiveness of formative assessment, van der Steen, van Schilt-mol, van der Vleuten, and Joosten-ten Brinke (2022) in the Netherlands emphasise that learners must have the chance to use feedback.

Furthermore, the use of formative assessment was found to be influenced by the following factors: psychological factors like social pressure, social factors like collaboration, and knowledge and skills like data literacy, according to a systematic literature review study carried out in the Netherlands to determine teachers' effectiveness in using formative assessment (Schildkamp, van

der Kleij, Heitink, Kippers & Veldkamp, 2020). They suggest that in their regular practices of assessment and instruction, teachers should take into account the three domains of knowledge and skills, as well as social and psychological variables. According to Schildkamp et al. (2020), data literacy is the ability to gather information about learners' learning and modify instruction in response to that information. It is important for assessment for learning (AfL) and teachers should be able to gather various kinds of data to use formative assessment in their instruction. They go on to say that the application of formative assessment necessitates knowledge and abilities in the creation and utilisation of a variety of assessment instruments, such as homework assignments and paper exams, as well as the critical evaluation of these instruments. The study also emphasises the necessity for teachers to be able to turn data into information by determining the requirements of their learners and using suitable classroom strategies like reteaching, assigning learners to different groups, or changing the way they are taught.

According to Sukmawati and Zuhairoh (2016), learners are divided into diverse groups consisting of three to five individuals. Each group is tasked with creating a showcase portfolio and choosing a suitable Mathematics issue for homework. The information that each group then displays includes the selected problem, the procedures used to solve it, the conclusions drawn from it, any challenges that were faced, and a written statement. Sukmawati and Zuhairoh (2016) state that the presentation stage should be followed, wherein groups attempt to provide feedback to each other once a presenter has finished, with the final step being asking each other questions as the teacher uses a rubric to evaluate the group presentations. Weldeana and Sbhatu (2017) emphasise that because the portfolio assessment rubric is open-ended and comprehensive, it should be established for scoring. As a result, the assessment rubric was divided into three categories: psychological, affective, and cognitive (Sukmawati & Zuhairoh, 2016). Thus, it should be mentioned that proficient educators make use of rubrics to arrange language performance in connection to predetermined standards (Ortega & Minchala, 2017). As previously mentioned, authentic assessment ought to be grounded in the three domains and evaluate learner work using a rubric.

2.6 IMPLEMENTATION OF AUTHENTIC ASSESSMENT: LESOTHO CONTEXT

The curriculum and assessment policy framework established the concept of authentic assessment, which has since become a crucial part of Lesotho's educational system.

Much work remains, nevertheless, as the framework continues to face criticism about the successful and efficient implementation of educational changes for learner achievement. Furthermore, there are not many studies on the phenomenon of authentic assessment in Lesotho.

2.6.1 Curriculum and Assessment Policy Contribution

Most of the 2009 Curriculum and Assessment Policy (CAP) changes, including authentic assessment, were implemented in the Lesotho educational system. According to Raselimo and Mahao (2015), the policy represented a significant shift from an examination-focused curriculum to an integrated one that is divided into learning areas that are designed to replicate real-world scenarios. The Ministry of Education developed the policy framework in response to the desire for education that satisfies societal expectations. The framework included cutting-edge components like an authentic assessment and a new integrated curriculum, which work to improve conventional paper-and-pencil assessment techniques and provide learners with real-world experience. The framework states that assessment techniques should both assist in achieving the curriculum's objectives and enhance the learning process (MOET, 2009). This indicates that the "reliance on summative paper and pencil tests should be complemented by authentic assessment approaches that demonstrate what a learner knows and can do" (MOET, 2009, p. 15).

The framework of the educational system emphasizes the significance of basic competencies that learners must acquire at every stage of their education. These competencies serve as gauges of how well learners can use their knowledge, talents, attitudes, and values. Effective communication, problem-solving, scientific, technological, and creative abilities, critical thinking, teamwork, and functional numeracy are all identified by the framework as crucial competencies that will support learners in responding to current and emerging circumstances.

The policy advocates for a coalition between the curriculum and assessment to accomplish the curriculum's goals and enhance the teaching and learning procedures. This alliance will develop solutions to enhance teaching and learning and accomplish the curriculum's objectives using input on learning progress. The strategy places a strong emphasis on giving learners meaningful feedback on their areas of need for development and on using formative continuous assessment at different educational levels to identify problem areas that need to be addressed.

Formative assessment includes authentic assessment as a process. It gives learners feedback and assists them in recognising their shortcomings so they can rank development ideas. For example, whether building a tool in the arts or entrepreneurship, learners might assess their work through trials and tests to see whether the tool works. They are given the chance to consider and experiment with more efficient methods as a result. By taking ownership of their education, learners foster a learner-centered approach rather than a teacher-centered one. As suggested by authentic assessment, in these situations teachers take on the role of facilitators, offering more significant assistance to the learning process.

It is now difficult to integrate curriculum and assessment to assess how concepts and abilities are used in real-world situations across the majority of topics, including the affective domain. This is due to the significant dependence on exams (MOET, 2009). Teachers' evaluation procedures in schools ignore alternate assessment approaches in favor of what examinations measure. Instructors are not taking into account scoring criteria, nor are they striving to employ tactics like composition, letter, or essay writing. The national assessment meant to advance children from grade 7 to grade 8 no longer takes these strategies into account. Teachers are not teaching these topics, even though they are part of the syllabus because they are not part of the national evaluation. This disconnects certain legitimate evaluation techniques from formative and summative evaluation processes.

Traditional paper and pencil methods are widely used in Lesotho's primary schools. This results in a widespread practice among grade 7 teachers to evaluate pupils' performance using former exam questions and textbook questions. However, this strategy might lead to a preference for lower-order over higher-order questions, which are necessary for learners to acquire real-world skills. Some of the curriculum's recommended principles are only partially implemented in Lesotho's primary schools as a result of a shortage of resources, notably technical ones (Raselimo & Mahao, 2015). As was previously noted in Chapter One, resource scarcity is a common issue in African nations, and it can also be caused by a lack of clarity in policy on innovation.

The integrated curriculum has been incorporated into the educational system following the policy, which promotes a thorough assessment of learners' performance. This strategy calls for the deployment of substitute tactics in place of established assessment techniques. The policy states

that the new curriculum divides subjects into learning areas. This action acknowledges that the traditional curriculum in the existing system fails to effectively address the problems Basotho people confront daily, including high rates of unemployment, sluggish economic growth, and extreme poverty. To address these issues, the curriculum was modified (MOET, 2009).

An integrated curriculum that integrates production, problem-solving, and knowledge is emphasised by the policy. With this interdisciplinary approach, the separate subject-based curriculum segments that were part of the prior curriculum are eliminated. The integrated curriculum focuses on teaching learners' survival skills while addressing concerns with intelligence, maturity, personal, and social development in a comprehensive manner. Therefore, rather than doing evaluation in silos as with prior curriculums, it should be addressed holistically for the integrated curriculum (MOET, 2009). Planning for authentic assessment, which includes creating authentic tasks and scoring criteria, could take longer using this method.

The introduction of the integrated curriculum resulted in a reform of the educational system. Primary and secondary education were divided into two categories: basic education, which covered the first ten years of schooling (from grade 1 to grade 10), and secondary education, which required two years to finish. The first exam, which was originally administered at the conclusion of grade 7, is now taken at the end of the tenth grade. At the conclusion of grade 12, this results in the awarding of Junior Certificate and Senior Secondary, with assessments conducted according to each learning area. The new curriculum encourages teachers to provide comments feedback on a learner's strengths and flaws during the assessment process, rather than evaluating learners solely on test scores. Each learning area in the learners' report books is structured with a section for the teacher to write comments. This is in contrast to the old approach, which merely provided one general comment regarding the learner's overall performance. The focus is on qualitative feedback for authentic assessment, and the commentary acts as feedback to notify other stakeholders about the learner's development. For remedial purposes, the policy framework highlights the use of authentic assessment techniques such as projects, portfolios, and practical tests. As seen previously in the chapter, these strategies call for teachers to possess the requisite competences in order to implement them.

2.6.2 Teachers' understanding of authentic assessment in Lesotho

The study of Khechane (2016) used a mixed-method approach to investigate the feedback practices of Mathematics teachers in Lesotho. The study found that most educators did not offer learners qualitative comments that would have highlighted their areas of strength and growth. Furthermore, learners did not make comments on either their own or their peers' work and 61% of teachers did not provide criteria for learners to mark their own or their classmates' work. Merely 50% of the educators employed guidelines to evaluate learners according to their learning process, as opposed to just the final product. Raselimo and Mahao (2015) discovered that teachers did not take into account the different talents of their learners and instead concentrated mostly on the cognitive domain. These findings underline the need for more research in this area by showing that teachers lack a grasp of how to employ real evaluation in their teaching.

2.6.3 Teachers' application of authentic assessment methods in primary schools

According to Motlomelo, as reported in Chere-masopha & Mothetsi-Mothiba (2022), a persistent obstacle has been Lesotho instructors' lack of experience using AA techniques like portfolios. According to Chere-Masopha and Mothetsi-Mothiba (2022) most teachers still place a greater emphasis on exams and tests than on using portfolios as an effective teaching tool. The majority of teachers utilise portfolios as files to record learners' performance from one class to the next, but very few use them efficiently. Khechane

(2016) discovered that Lesotho primary school teachers employed various strategies, such as oral work, written assessments, homework, and observation, rather than portfolios. Nevertheless, the use of performance tasks and peer and self-assessments to evaluate Mathematics was insufficient. Therefore, there is a need for more research that takes into account other learning areas as well, as the study only looked at one. The AA method's maximum implementation in Lesotho's primary schools was found to be hampered by a lack of time, knowledge, and resources (Chere-Masopha & Mothetsi-Mothiba, 2022; Khechane, 2016). The current study included the Creativity and Entrepreneurship learning area because past studies concentrated on the learning domains of English and Mathematics.

2.6.4 Teacher professional development: Lesotho perspective

In the opinion of Chere-Masopha and Mothetsi-Mothiba (2022) and Khechane (2016), there is evidence that Lesotho's teachers lack the necessary training on the education reforms, which include the interim curriculum, assessment for learning, and portfolio. A similar issue arises with

authentic assessment since primary school teachers have not had the necessary training to incorporate it into their curricula. Consequently, the current study seeks to explore efforts made or being made to provide educators with the necessary training to implement AA.

2.7 SUMMARY

The chapter has illustrated constructivism learning theory which considers learners as constructors of their learning. The involvement of a learner in the learning arena becomes a key aspect in which a teacher is a mentor facilitating learning. The constructivism advocates for collaborative learning, revolving around learner-centered approaches such as peer and self-assessment which are authentic assessment strategies, responding to learners' achievement beyond schooling activities. Thus, AA triggers problem-solving skills, and higher-order thinking skills, that produce critical and creative thinkers, for the wealth of the country. Hence, concerns about authentic assessment techniques were also discussed.

The chapter also examined relevant research conducted worldwide, noting its shortcomings, issues, and potential solutions in light of reviews and reflections from educators. Hence, outlines the competencies of instructors in using authentic assessment in their instruction to help them improve their teaching and assessment activities from learners' autonomy.

CHAPTER 3: RESEARCH METHODOLOGY AND DESIGN

3.1 INTRODUCTION

This chapter provides an outline of the methodology used in the current study, the paradigm adopted which is the interpretivist approach, and it explains why a qualitative approach was deemed suitable. Additionally, a case study design is described with emphasis on the rationale behind its choice for this study. Thereafter a discussion of the methods adopted for participant selection, data collection, and analysis for the study are discussed. Lastly, two crucial issues relating to the study's credibility, namely trustworthiness and ethical considerations, are addressed.

3.2 RESEARCH METHODOLOGY

Methodology is the systematic, theoretical exploration of a procedures practical to a field of study for which quantitative and qualitative approaches are identified components (Swarooprani, 2022). According to Samanth (2024), research methodology outlines the methods to be used in conducting research, which consists of numerous approaches that can be used to conduct research. This implies overall strategies a researcher uses to delve into the matters of the study. Thus, with the current study a qualitative methodology was deemed suitable to explore issues therein.

3.3 RESEARCH APPROACH

Qualitative research is an approach that relies on observations, descriptions, and subjectivity to gather non-numerical data that provides insightful answers to the "why" questions (Ugwu & Eze Val, 2023; Goundar, 2019). For Ugwu and Eze Val (2023), this approach does not require a large sample size, as even a very small one can be acceptable. This was found suitable for the current study because a few participants are incorporated. It is useful for investigating complex issues, and its descriptive nature can provide practitioners with new insights (Goundar, 2019) hence its usefulness to inquire teachers' in-depth knowledge and experiences. This approach allows for creativity to be a driving force (Ugwu & Eze Val, 2023). They further refer to qualitative research as a valuable tool for gathering real ideas from socio-economic demographics.

3.3 RESEARCH PARADIGM

A paradigm is a framework that represents a viewpoint of the world through four dimensions namely, the ontological, epistemological, methodological, and axiological. According to Kivunja

and Kuyini (2017), an educational research paradigm describes a researcher's worldview or as Antwi and Hamza (2015) argue, it reflects a research culture consisting of shared beliefs, values, and assumptions. Sefotho (2015) highlights that paradigmatic assumptions should be communicated in a way that indicates their ontological, epistemological, and methodological stances to help the researcher maintain consistency throughout the study. A paradigm guides research and shapes how people form belief systems about theories (Sefotho, 2015).

An interpretive paradigm was adopted for this study. Omodan (2020) argues that interpretivists recognise multiple realities in social issues, whereas positivists believe in one reality. According to Bonache and Festing (2020), interpretivism is an approach that emphasises comprehension of socially constructed opinions through observation, interviews, and record-keeping. Interpretivists comprehend life through a point of view and interpretations, as opposed to positivists who see a single social reality and the world as objective (Bonache & Festing, 2020). The primary focus of the qualitative paradigm is on how a researcher uses object comparison, contrast, and classification to make sense of social features (Creswell, 2014). Creswell goes on to say that the researcher's complete immersion in the everyday circumstances of the study site is essential because behaviours like gathering information and creating meaning through ongoing interactions are realistic for achieving the participants' points of view.

3.3.1 Ontology

Ontology is the study of the nature of existence, including the fundamental categorization and arrangement of objects (Kivunja & Kuyini 2017). The concept of ontology is related to our beliefs about reality and the social world, or what exists (Al-Saadi, 2014). Sefotho (2015) explains that ontology is about how we perceive reality and phenomena when formulating research problems. A weak research problem can result from poor formulation of ontology. The problem identified for this study is that teachers are not competent in applying authentic assessment and I believe the status exists because they lack skills due to unpreparedness.

Scotland (2012) suggests that scholars should take a position on how they view the world and how it functions. This study reviewed how instructors use authentic evaluation in their instruction practices intending to help learners acquire skills for problem-solving in the society where they live. Gemma (2018) argues that interpretivism has a relative ontological perspective, meaning that relativists believe reality is constructed through social interactions, and there is no single reality

hence selecting participants from more than one school to explain AA from more lenses. Knowledge and truth are arbitrary and dependent on people's experiences and their understanding. Al-Saadi (2014) also believes that external reality can only be understood through human minds and socially constructed meanings, with no shared social reality. Therefore, my views and beliefs of a researcher influenced how I gathered, evaluated, and analysed data for the current study (Gemma, 2018).

3.3.2 Epistemology

Park, Konge and Artino (2020) define epistemology as a way in which knowledge is understood; our beliefs about how we acquire knowledge about the globe (Gemma, 2018), and a method of comprehending the globe and trying to make sense of it (Al-Saadi, 2014). In inquiries, epistemology is used to express how knowledge is acquired and how truth and reality are understood (Kivunja & Kuyini, 2017). This study is concerned with how teachers understand the nature and forms of authentic assessment and it can be generated through engagements with implementers such as teachers. Al-Saadi (2014) presents the interpretivism epistemological position, which views knowledge as being produced through exploring and comprehending the social world of the people being studied which in this study worldviews of teachers on how they utilise authentic assessment.

3.4 RESEARCH APPROACH

A qualitative approach was adopted for this study and this involved investigating and comprehending how people or organisations address human or social issues (Ahmad, Wasim, Irfan & Gogoi, 2019; Creswell, 2014) and in this case, how the Ministry of Education and Training implemented CAP which emphasised AA. This naturalistic approach seeks to obtain comprehensive information through unstructured research methods, examining complex phenomena and interpreting observations to gain insight into people's thoughts and feelings (Ahmad et al, 2019).

Researchers who want to understand the meanings attributed to participants' experiences find qualitative research helpful (Sutton & Austin, 2015). In this study, I was concerned with gaining a deeper understanding of teachers' use of AA as well as the values, beliefs, and the rules that govern their lived experiences to comprehend their authenticity (Omona, 2013). The constructivist perspective emphasises the dynamic creation of knowledge, which aligns with the focus of

qualitative research (Omona, 2013). According to Creswell (2014), qualitative research is a holistic approach that involves multiple processes, the reporting of numerous perspectives, and the researcher's reflexivity, which involves reflecting on the study's perspectives, participants' personal backgrounds, culture, and experiences that contribute to the data. Sutton and Austin (2015) argue that reflexivity is important for researchers to be aware of their own biases, articulate their worldview, and help readers understand the research questions, data collection, analysis, and findings. To comprehend a phenomenon, qualitative research emphasises both the process and the final output. My reflexivity involved how I understood teachers' use of AA assessment and efforts to dissociate my experiences of using these forms of assessment as a practicing primary school teacher as well. Data is evaluated based on the particulars of each instance rather than broad generalisations (Creswell, 2014). Omona (2013) notes that generalisation is not the goal of qualitative research.

Qualitative research approaches aim to bring about a more profound comprehension of the subject matter. The number of participants needed for the analysis is determined based on the research objectives, such as conducting interviews with three to six contributors over several periods (Palinkas, Horwitz, Green, Wisdom, Duan & Hoagwood, 2016). These techniques can help scholars comprehend the reasons and patterns behind certain manners (Sutton & Austin, 2015). Additionally, Omona (2013) notes that these procedures can bring out attributes like comfort, engagement, empathy, humanism, and dedication that might be absent in further research structures.

3.5 RESEARCH DESIGN

Research design is defined by Abutabenjeh (2018) as a roadmap for research processes that outlines the steps that a study should take from the research purpose and questions to the final results. The research design also involves the use of data collection and analysis to gain a better understanding of the topic under investigation. The research process is characterised by the posing of a question, the collection of data to answer that question, and the presentation of the findings to address the research question (Abutabenjeh, 2018). Research designs are categorised as exploratory techniques in mixed methodologies, qualitative, and quantitative approaches and they offer precise procedures for conducting research (Creswell, 2014). Qualitative research design, for instance, guides data collection, analysis, and writing through various inquiry systems such as biography, case study,

ethnography, grounded theory, and phenomenology (Ahmad et al. 2019; Creswell, 2014). This study focused on a case study as a research design.

3.5.1 Case study

Creswell (2014) defines a case study as an inquiry design that can be found in various fields. Its purpose is to conduct a thorough examination of a case, including a programme, incident, activity, or procedure, or an individual or group of people. This method involves exploring processes, activities, and events that can be limited by time and activities. Researchers gather comprehensive data by utilizing various methods for gathering information, which can continue temporarily (Creswell, 2014).

According to Reboji (2013), a case study is greater than just a methodological selection. It is a type of qualitative research that involves the explanation and evaluation of a particular situation. The goal is to identify elements, configurations, and relationships among partakers to evaluate output or advancement. Case studies are useful when unfolding or scrutinising the happenings (Reboji, 2013) and this study particular needs of educators who must use AA as a novel method preferred by CAP.

Four to five instances are typically included in qualitative research interviews, observations, and case studies (Creswell, 2014). To comprehend the experiences of teachers in using AA, two schools were chosen as cases for the current study, and thirteen participants were chosen on purpose in order to supply rich material as needed.

3.6 PARTICIPANT SELECTION

Two main sampling procedures were used for the study, namely: convenience and purposive sampling. Convenience sampling was used for the selection of schools while purposive sampling was used for participants selection. According to Stratton (2021) convenience sampling is a non-probability sampling type often used for clinical and qualitative research. It is drawn from the source that is conveniently accessible to the researcher (Andrade, 2021). Both Andrade (2021) and Stratton (2021) highlight that convenience sampling consists of findings that are not generalisable to the target population, or that has the characteristics of the sample studied not the entire population. Again, convenience sampling has high internal validity if the study is methodologically sound/convincing (Andrade, 2021) whilst also less costly, quicker and simpler compared to other forms of sampling and, hence, popular (Stratton, 2021). In this study, convenience sampling was

preferred for schools that were within the proximity to my workplace and where I live to avoid the costs of travelling. As a part-time student and full-time employee, I did not want to inconvenience my employer through absenteeism and the participants by making them work after hours. While the schools were chosen conveniently, the participants were purposively selected. For observation purposes, English, Mathematics, Creativity and Entrepreneurship teachers were selected rationally for exploration of how they apply authentic assessment across these learning areas.

Purposive sampling was deemed suitable for the study due to its ability to provide comprehensive information at reasonable costs with a smaller sample size (Campbell et al., 2020). This approach helped me gain a better understanding of the problem and research questions. The study used purposive sampling to select specific levels, namely grades 5, 6, and 7, and thirteen teachers were chosen from two schools located in Maseru. This decision was based on the fact that teachers in these grades were expected to provide the necessary facts (Campbell et al., 2020) and had specific familiarity with, and understanding of the phenomenon being studied (Palinkas et al., 2016). According to Taherdoost (2016), purposive sampling is used to gather information that cannot be obtained elsewhere by selecting specific settings, persons, or events. Additionally, Creswell (2014) asserts that purposive sampling is beneficial as it allows the researcher to gain insights into the problem and research questions with a smaller number of participants.

Accordingly, teachers of grades 5, 6, and 7 were purposefully chosen as participants because, in contrast to lower grades, curricula for upper grades consist of various learning areas encompassing different concepts therein, which enhances the entire exploration of the study's phenomenon across subjects. This is opposed to lower ones where these subjects are grouped into four categories (learning areas) namely: English window, Sesotho window, Numeracy window, and Integrated part. The sample consisted of 13, sixth and seventh-grade educators, four from school 1 and nine from school 2. Selection of upper grades was intentional particularly because teachers at this level are highly likely to cling to the paper and pencil method, as they have been used to with prior curriculum, in preparing learners for their seating of examinations ending grade 7. Another reason that informed the choices was deviating from two previous studies in Lesotho to fill up the gap. Khechane (2016) focused only on lower grades, while the recent Lesitsi's (2022) study was based on secondary teachers which is the aim of the study. However, two of the participants could not make it to classroom observations, although they initially agreed to participate in the study and

had signed the consent form. These were Mathematics teachers, one in school 1 and the other in school 2 respectively.

3.7 DATA COLLECTION

Creswell (2014) suggests that there are four primary data collection methods for qualitative studies: observations, audio and video content, document analysis, and interviews. Therefore, researchers are advised to assemble numerous sources of data, rather than depending on one source, (Creswell, 2014). The current study utilised semistructured interviews, classroom observations, and document analysis with the help of audio and video recordings, employing a multiple-case study design. The data was collected during academic sessions through individual interviews with teachers, classroom observations, and analysis of teachers' documents, which included lesson plan books and schemes and records of work done. The collected data covered different subjects, including Mathematics, which is a core learning area in Lesotho and is usually identified as an area where learners perform poorly in end-of-level examinations. Again, poor performance is registered in English, which is a medium of instruction and Creativity and Entrepreneurship, which are project-based.

Hence, the researcher used multiple data collection strategies, which were both deductive and inductive, depending on the meanings given by informants (Creswell, 2014). According to Ahmad et al. (2019), qualitative gathering and analysing of data involve pieces with unrestricted questions and include data gathering strategies such as the gathering of records, informal interviews, and participant observation. Therefore, regardless of the method used, a significant amount of data is collected (Sutton & Austin, 2015). As Lester, Cho, and Lochmiller (2020) present, data collection can involve hours of interviews, pages of observational notes, and numerous documents. Moreover, Sutton and Austin (2015) suggest that audio or video records should be transcribed verbatim before data analysis, which was also done in the current study.

3.7.1 Semi-structured interview

Young et al (2018) explain interviews as flexible and allow for in-depth analysis from a small sample, whereas questionnaires do not allow for interaction. The study used semistructured interviews with one participant at a time, incorporating both open and closed-ended questions, often probing with how and why questions to consider unforeseen issues (Adams, 2015). The interviews were conducted face-to-face telephonically with two participants who could not be physically

accessed. Young et al. (2018) agree that telephone, group, and in-person exchanges can all be considered interview practices.

According to Adams (2015), a small number of desired participants or persons who are similar to them should participate in the pilot tests. This study was piloted using an interview guide, and a coworker who shared the same qualities as the participants and was consulted to offer feedback on the questions and to recommend modifications (Creswell, 2014). According to Creswell (2014), the questions that were created should contain standard operating guidelines for the interviewer to follow across all of the interviews. McGrath, Palmgren, and Liljedahl (2019) suggest that researchers should construct the interview guide in advance with volunteers to test the success of the interview and to clarify questions where necessary, which is useful for novice researchers.

The verification of the data generated was pertinent to the study to make any necessary adjustments (Young et al., 2018).

The interview with Mathematics teachers had a firm emphasis that required solving number skills, which are more challenging to teach in primary schools in Lesotho. For English language, the main emphasis was on essay topics, while for arts and entrepreneurial courses, the focus was on project-based topics. I collected data by writing and documenting some lessons for every topic and module covered in each of the three fields of study. Creswell (2014) suggests that scholars can make a recording of data through audio or video recording or by writing notes. However, they should prioritise written records in case of inconsistencies in recording devices.

3.7.2 Observation

One type of observation is qualitative observation, which involves the researcher taking field notes on the behaviours and activities of individuals in a setting. The researcher can record these notes in a semi-structured manner and may use prior questions to guide their investigation (Creswell, 2014). To evaluate teachers' competency in using authentic assessment methods to enhance learning, their lessons were audio-recorded and sometimes videotaped. Selected units were observed, with lessons in each learning area being recorded separately. During the observations, some gestures and actions were noted that carried additional meanings.

3.7.3 Document analysis

Qualitative research allows for the collection of data through public or private documents, such as personal journals or diaries (Creswell, 2014). As part of the study, ten preparation books belonging to teachers were reviewed and analysed. The books were lesson plans, schemes and records of work done. The purpose of the analysis was to examine how teachers planned to use authentic assessment and its methods. It should be noted that authentic assessment necessitates careful preparation.

3.8 DATA ANALYSIS

The process of reviewing the data provided by participants and conducting information interpretation using specific phases is referred to as data analysis (Amhad et al., 2019; Creswell, 2014). Qualitative data analysis is described by Lester et al (2020) as a nonlinear interactive process that is flexible but rather messy. Phases are used to systematise and structure data so that the process is transparent to the researcher and report readers (Lester et al., 2020). Creswell (2014) states that the categorisation of objects, persons, occasions, and attributes that define them is included in qualitative data. He further accentuates that data collection and analysis for qualitative research happen concurrently, with data being methodically arranged, constantly evaluated, and continuously coded. As a result, for this study, data collection preceded data analysis, with each written text that was collected being coded afterward. As stated in the first chapter, audio recorded data must be transcribed verbatim. Therefore, taped audios, whether from observations or interviews, were first transcribed into written texts and then hand-coded.

3.8.1 Thematic analysis

Thematic analysis refers to a variety of approaches used to identify patterns in qualitative data groups and is often considered an analytic method rather than a methodology (Lester et al., 2020). It enables researchers to make sense of other forms of analysis and can analyse data sets of varying sizes while also sorting through them to identify similarities (Lester et al., 2020). Thematic analysis is particularly useful in case study research as it can be applied to both large and small data sets, and is especially valuable when exploring new areas of research (Clarke & Braun, 2017). Due to its flexibility regarding research inquiries, sample magnitude, and techniques for gathering data, thematic analysis is often used to generate meaningful and relevant analysis (Clarke & Braun, 2017; Lester et al., 2020). Additionally, both theory-driven (deductive) and datadriven (inductive)

approaches can be used (Clarke & Braun, 2017; Lester et al., 2020). Inductive analysis allows patterns, categories, and themes to naturally arise from the data rather than being imposed upon them beforehand (Lester et al., 2020). Therefore, for the current research, the participants' opinions were regarded as a starting point to develop theory. Thematic analysis typically involves a series of steps, as outlined below.

3.8.1.1 Become familiar with the data

I first read through the transcribed data to become acquainted with it (Maquire & Delahunt, 2017). I then took notes on the ideas and experiences shared by interviewees, observed in recordings, or described in documents. These initial notes were used to develop a comprehensive analysis, as recommended by Lester et al. (2020). Through this process of familiarisation, as described by Lester et al. (2020), researchers can become aware of any limitations or gaps in the existing literature, and can use this knowledge to guide further data collection or research.

3.8.1.2 Generate initial codes

Generating initial codes is the first step in organising data systematically. This involves using coding to distill information into digestible chunks (Maquire & Delahunt, 2017). A code is a term or phrase that describes the data and provides the researchers' analytical goals (Lester et al., 2020). To generate codes, I carefully examined the data, identified preliminary ideas, and made connections between statements, experiences, and reflections presented by participants. This process involved making clear connections to the study's conceptual ideas (Lester et al., 2020). During the coding process, the interview material was divided into sections that described several categories and were defined utilising inductive methods.

3.8.1.3 Search for themes

The process of searching for themes in data involves identifying significant patterns using preliminary codes that are grouped into themes (Maquire & Delahunt, 2017). According to Lester et al. (2020), thematic evaluation is an inductive process where academics start with specific instances and move toward broader interpretations. The process involves applying codes, developing categories, and finally producing themes. During the search for themes, I organised codes into themes using units of data to identify relevant patterns. For example, some codes included the adequacy of teaching and learning materials and funds for purchasing learning materials. At an early stage of data analysis, coding alone cannot provide the complete story but it

allows researchers to compare and contrast different codes to identify categories and their interrelationships. Clarke and Braun (2017) explain that codes are micro-level units of examination that portray important structures of information related to research subjects and serve as components that make up themes.

3.8.1.4 Review themes

In the fourth phase, the established themes from step 3 are evaluated to determine their significance, which to achieve, all pertinent data related to each theme is compiled and analysed together (Maquire & Delahunt, 2017). This is known as an inductive process where the data is continuously reviewed and worked with until a comprehensive set of themes is established (Creswell, 2014). During this process, some themes may be eliminated or merged to create new ones. I therefore reviewed the data from each theme to gather more evidence that supports them.

3.8.1.5 Define themes

In the last step, it is essential to filter themes by examining their relationship and how subthemes, if any, relate to the main themes. This process is crucial for coherence and meaningful representation of findings. Maguire and Delahunt (2017) recommend this step. Meanwhile, Sutton and Austin (2015) suggest combining codes taken from a transcript or transcripts to achieve coherence and insightful depiction of the results. The theme "support for teachers' effective implementation of authentic assessment" is applied, for instance, when participants describe how they were not given enough assistance to carry out authentic assessment effectively. Examples of this assistance include inadequate syllabi and teacher guides, a lack of technical resources, and a lack of parental support for learners to receive additional learning materials.

3.8.1.6 Write up

The next step after conducting interviews for a dissertation or journal article is report writing (Maquire & Delahunt, 2017). In light of Young et al (2018), the written work should involve a crucial assessment of the conversations, including their benefits and drawbacks, and providing remarks for those who were participating. Lester et al (2020) consider this final action as transparently completing the analysis because thematic analysis requires presenting the data in a transparent, confirmable manner. To maintain transparency, I consulted the participants to confirm the results, reviewed recordings, videos, and written notes on the analysis of teachers' planning books and justified them against codes, categories, and themes. The act of creating a thorough

audit trail that demonstrates a relationship between data sources, codes, categories, and themes is then used to explain transparency to researchers (Lester et al., 2020). Sutton and Austin (2015) also recommend that to bolster the conclusions, literary examples be used.

3.8.2 Presentation of Findings

At present, every theme is transformed into a sector heading in the illustration. Codes are then recorded beneath every theme, along with transcripts and the researcher's interpretation of what the themes signify (Sutton & Austin, 2015). Any conclusions drawn were based on the quotes provided by the respondents. Sutton and Austin (2015) imply that literary examples ought to be incorporated to assist the researcher's discoveries. The findings are presented in the following chapter.

3.9 ETHICAL CONSIDERATIONS

When performing research, one should exhibit an understanding of what is appropriate or inappropriate (Kivunja & Kuyini, 2017). Akaranga and Makau (2016) similarly stress the importance of research morals, which requires researchers to protect the dignity of their subjects and carefully handle the information they receive. According to Kivunja and Kuyini (2017), ethical consideration involves respecting the rights of participants and acknowledging their inherent dignity. Creswell (2014) states that researchers should pay attention to the needs, values, and desires of participants, and build trust with them throughout the research process. Therefore, this study adhered to ethical standards such as the principle of do no harm, obtaining informed consent, maintaining confidentiality, and ensuring anonymity.

3.9.1 The principle of do no harm

Creswell (2014) argues that protecting the rights of research participants requires a clear articulation of research objectives and an explanation of how information will be gathered, whether verbally or in lettering. Akaranga and Makau (2016) suggest that participants ought to be assured that their provided data will be kept confidential. Nevertheless, if there is a need to disclose information, a consent form must be prepared for participants to ensure that they are not subjected to any psychological or physical harm and that no embarrassing questions are asked. Before data collection, my supervisor and I had indepth discussions based on the research questions, and we agreed that none of the questions seemed to have information that could cause psychological harm or embarrassment. I also clarified any questions that participants found difficult to understand.

Participants were informed that their information would not be disclosed without their consent, and they were given consent forms to sign for their agreement to ensure that no harm would come to them, as detailed below.

3.9.2 Informed consents

Akaranga and Makau (2016) suggest that informed consent is a significant ethical issue in research where individuals intentionally provide their consent after being informed about the study. Young et al (2018) view informed consent as a way to ensure that participants understand the project's goals and how their data will be used. The participants were informed about the study's purpose and potential benefits of participating (Akaranga & Makau, 2016). Informed consent provides respondents with autonomy, allowing them to decide whether or not to participate in the study. The process started with a clearance letter from the National University of Lesotho which was used together with my letter to seek permission from the Ministry of Education to conduct the research. The Ministry of Education then provided a letter to the principals of the selected schools, permitting data collection in their classrooms by the researcher. After informing the participants of the study's importance, they each signed informed consent forms (Creswell, 2014) to accede to beginning of data collection at each of the participating schools. The research focused on grade 5, 6, and 7 educators per studying areas. The principals approved class observations involving minors' participation, and the participants consented to be recorded on camera and by audio, with the assurance that their identity would stay anonymous.

3.9.3 Confidentiality and anonymity

As noted by Akaranga and Makau (2016) an important aspect of research is confidentiality and anonymity. Anonymity refers to keeping participants' cultural backgrounds secret, while confidentiality ensures the protection of their identity (Young et al., 2018). To maintain participants' privacy, the study refrains from using their names or revealing any sensitive information (Akaranga & Makau, 2016). The researcher intervened with the participants multiple times, making confidentiality crucial for building trust. Dougherty (2021) emphasises that the researchers must ensure that the information gathered from the participants cannot be traced back to them. Therefore, the participants are named School 1 grade 5 Mathematics teacher (S1G5MT), School 2 grade 5

Mathematics teacher (S2G5MT), and so on. It is worth noting that it may not be possible to verify which school is labeled 1 and 2, as some teachers in primary school may teach all the subjects.

3.10 TRUSTWORTHINESS

Four criteria of trustworthiness—credibility, transferability, dependability, and confirmability—are used to characterise trustworthiness in qualitative research. According to Rose and Johnson (2020), trustworthiness in qualitative research is defined as the systematic rigour of research design, the credibility of the study, the believability of the findings, and the applicability of the research methods, all of which contribute to the overall quality of research (Campbell et al., 2020; Rose & Johnson, 2020; Stahl & King, 2020; Sutton and Austin, 2015). Unlike quantitative research, qualitative research lacks statistical tests that can be used to verify reliability and validity (Sutton & Austin, 2015).

3.10.1 Credibility

Credibility is a term used by interpretivists in research, which relates to the extent to which information gathering and scrutiny can be considered reliable and believable (Kivunja & Kiyuni, 2017). This means that the data gathered and scrutinised must be accurate and authentic to be considered acceptable. Scotland (2012) defines credibility as the provision of reliable and justifiable evidence that can be replicated in subsequent research. In other words, if the same study were to be conducted again, it should yield the same results. Thus, credibility is based on the veracity of the results (Sutton & Austin, 2015), as well as the extent to which they align with realism (Stahl & King, 2020). According to Stahl and King (2020), triangulation—the process of using several sources of field data to find patterns—can help establish trust. Thus, to find patterns common to these various data collection approaches, the current study used observation, document analysis, and interviewing. It is important to remember that triangulation refers to the use of many methods for data collecting and analysis. Other techniques used in this study to enhance credibility include member checking, whereby participants were sent the transcribed data to verify its accuracy, and peer debriefing, in which another master's learner reviewed the transcripts and wrote to identify any discrepancies (Stahl & King, 2020; Rose & Johnson, 2020).

3.10.2 Transferability

The ability for findings to be applicable in another scenario is known as transferability (Sutton & Austin, 2015; Rose & Johnson, 2020). Interpretivists use this phenomenon to provide sufficient contextual information, allowing readers to potentially connect the findings to their own

experiences and situations (Kivunja & Kuyini, 2017). According to Scotland (2012), transferability is the ability for the outcomes to be used by another person in a new setting. As a result, the study's methodology has been described in detail to make it simple for readers to connect the information gathered with the findings reached. Furthermore, transferability is seen by Stahl and King (2020) as the second aspect that aims to broaden understanding by transferring results from one context to another; the application of transfer depends on explanations that take into account contextual details about the fieldwork.

3.10.3 Dependability

Qualitative research involves building trust through three perspectives. Dependability has to do with the trust in events as they are revealed (Stahl & King, 2020). Researchers aim to achieve consistency in results, which is referred to as dependability (Rose & Johnson, 2020; Sutton & Austin, 2015). To ensure dependability in research, Stahl and King (2020) recommend allowing a different researcher to review and comment on the field notes for confirmation. On emphasis, Nowell et. al (2017) urge the study's findings to be auditable if the next researcher can be able to systematically follow the result trail. As a result, the study's dependability was guaranteed by a transparent audit trail that included raw data records, field notes, transcripts, and a reflexive journal to help organise, relate, and crossreference the data. It also made it easier to report on the research process (Nowell, et al., 2017).

3.10.4 Confirmability

Confirmability aims to achieve objectivity as much as possible in qualitative research (Stahl & King, 2020). It involves ensuring that the study's findings are not influenced by the researcher's biases, motives, or interests (Sutton & Austin, 2015). Confirmability is a way of avoiding or minimising researcher bias by giving voice to the participants' perspectives (Kivunja & Kuyini, 2017). Interpretivists use confirmability to describe the degree to which other researchers in the field confirm the research project's results (Kivunja & Kuyini, 2017). Confirmability analysis is based on data from different perspectives that frame similar concepts (Rose & Johnson, 2020). Qualitative researchers collaborate with other researchers and depend on precision in their work to uphold this principle (Stahl & King, 2020). To support confirmability, there must be presentation of findings quotes excerpts to support identified themes and let the data speak for itself. Moreover,

all the collected data was for verification of the final outcomes, meaning the transcriptions and recordings were used for authentication.

3.11 SUMMARY

This chapter discussed the research paradigm, research methodology guiding the investigation, research design, participant selection, data collection techniques, and data analysis. The study employed a triangulation approach to collect data, integrating interviews, observations, and document analysis to improve the reliability of the findings. Eventually, ethical issues and the reliability of research were taken into consideration.

The next chapter presents the findings of the research.

CHAPTER 4: PRESENTATION OF FINDINGS

4.1 INTRODUCTION

This chapter presents the study findings from data collected through interviews, observations, and document analysis on educators' application of authentic assessment. The discussion is on the following themes identified in the analysis: teachers' understanding of AA, teachers' application of AA, and teachers' preparedness to implement authentic assessment in teaching primary school curricula. Included are some themes that emerged. The themes and subthemes are tabulated below:

THEMES						SUBTHEMES					
1. Teachers' understanding of authentic assessment About teachers' perception of what AA implies and its importance						- Teachers' perception of AA Views of teachers about AA as an innovative strategy to assess the interim curriculum - Benefits of AA Views about teachers' understanding of the vital role AA plays in their teaching for learners' achievement					

2. Teachers' application of AA Teachers' views about their utilization of AA methods in their teaching per selected learning areas for the study That is do teachers' classroom practices align with AA to promote the learning process Do teachers' practices in their daily lessons' observations and preparation books and record documents reflect the use of AA	• The use of AA in Mathematics Descriptions of how teachers use AA methods in their teaching of Mathematics for learners' conceptualisation of concepts • The use of AA in English Description of assessment methods teachers employ in teaching English. Do teachers attempt into concepts that mostly require AA in their teaching for meaningful application of AA to benefit learners • The use of AA in Creativity and Entrepreneurship. Description of AA strategies teachers utilise the phenomenon and reasons accompanied by failures and successes in their application.
3. Assessment of teachers' use of AA About teachers' elaborations on the successes and constraints encountered in applying AA	Emerging theme
4. Classroom adaptations of implementing AA Teachers outline and explain changes/modifications they had to incur for effective implementation of AA in the teaching and learning arena	Emerging theme

5. Teacher preparedness to use AA Descriptions of training uttered to teachers, guiding them to apply AA, meaning adequacy in the skills they possess from training attended	□ Teacher training for the use of AA Teachers' views on the training they undergone in preparation for efficient implementation of AA
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4.2 TEACHERS' UNDERSTANDING OF AUTHENTIC ASSESSMENT

This section presents participants' views of AA concerning the new curriculum.

4.2.1 Teachers' Perceptions of Authentic Assessment

In addressing how teachers understood authentic assessment the following are some of the participants' responses:

MTS2G7 states:

AA means that learners should be assessed using formative assessment, conducted during the lesson, and summative which can be at the end of a lesson or quarter.

ETS2G6 notes:

Authentic assessment is when something is real, not fake.

In the realisation that the definition informs the term “authentic” not authentic assessment. A follow-up question was imposed; how do you relate it in the teaching context? She extended the illustration as follows:

In the lesson, a teacher does not just ask learners questions in the evaluation but throughout for learners to be knowledgeable.

For ETS1G6, AA concerns;

Teaching in a manner that learners apply what they have learned at home. Learners become involved in their learning.

It is a method that helps learners perform better, helping them with life skills, such that in completing schooling they will be able to apply the skills in the society to make their living. For example, modeling “linkho” for selling, CETS2G7 accentuated.

MTS1G7 as one who got introduced to AA while pursuing a B.Ed. Honours degree describes:

AA regards teaching and learning methods that involve learners, it is learner-centered.

She moves on to say: *It is an assessment of learners’ general performance regarding everything a learner does, either at school or at home.*

It can be observed that teachers' understanding of authentic assessment AA varies and as not well informed. For instance, many teachers are unaware that AA primarily focuses on assessment practices that occur during teaching and learning rather than on assessment of learning. This misunderstanding is reflected in their reliance on summative assessment practices, which are often mistakenly associated with activities meant for assessment for learning. Although interviewees generally view AA positively, recognising its potential to enhance learner engagement in teaching and learning contexts, only a few connected it to skill acquisition and problem-solving which are the main aspects it necessitates. These findings highlight the need for professional development among teachers as evidenced by the fact that the participant who recognised the importance of skill acquisition had pursued further studies.

Additionally, classroom observations revealed that teachers typically conclude, their lessons with evaluations involving tasks that neither relate to real-world situations, nor linked to the upcoming lesson. This suggests that for these teachers, assessment is predominantly viewed as something that occurs at the end of the lesson. Consequently, they believe their assessments are accurate as long as the questions align with lesson content, regardless of whether they promote deeper thinking among learners. This approach indicates a heavy reliance on traditional paper and pencil methods in curriculum implementation.

When asked whether educators share a similar understanding of AA, the participants' responses were mixed. Some participants agreed that teachers' perceptions of AA were comparable, while others expressed no opinion. However, most participants believed that teachers' perceptions of AA vary. A summary of their opinions is provided below:

CETS2G5:

I think they have a similar understanding because of the workshops held by NCDC on new curriculum implementation which were run country-wide. The only difference can be the availability of resources to deliver. For example, no computers...

According to ETS1G7, this could be neither, nor similar across the country.

I think it is not similar, but I can't judge. However, if teachers comply with what the new curriculum requires, I hope they are doing it across the country.

Notwithstanding, most participants consider teachers' understandings to vary, as demonstrated below.

Conversely, ETS1G5 comments:

No, not really, because our knowledge and educational levels are acquired from different institutions. For example, some hold Diplomas, Degrees, and honors.

Otherwise, MTS1G6 argues:

It is not similar because some teachers misunderstand that we teach learners from the knowledge they already have and build on that knowledge.

CETS2G7 argues:

I don't think it is similar because not all teachers had a chance or were privileged to attend workshops for sufficient knowledge to apply these innovations. This is because even trained teachers are unable to deliver the contents from workshops...

ETS1G6 and ETS2G7 retained similar responses that people's understanding is never the same as everybody has their understanding.

According to the findings teachers' understanding could be observed as that of content first, then assessment follows. Meaning they aim to impose knowledge instead of seeking information from learners for discovery learning. This says alternative assessments such as authentic assessment are hindered. Hence, one can conclude that all teachers, workshopped, and those who did not have

challenges delivering the knowledge attained. Indicative that teachers remain naive of educational reforms, yet, they are the main implementers in schools.

Viewing the illustrations per participant's perceptions of AA one could conclude that they have an impaired understanding of the phenomenon as each one just highlighted a certain part of what it means. Thus, researchers of the phenomenon (AA) refer to it as a valuation method that sits on intellectually stimulating and personally significant problems or assignments (Frey et al., 2012), tasks replicating how knowledge is evaluated in practical settings, meaning it is realistic (Koh, 2017; Mueller, 2018).

Participants' thinking as demonstrated by the findings is that teachers' understanding of AA may not be rated similarly, due to variety of factors which include; educational levels obtained from different institutions, inadequate training workshops, scarcity of resources, and their levels of acquainted skills. These could be true to some extent as during teaching the interviewee who claimed to have an idea about AA due to professional development applied some AA methods such as the presentation of findings by learners on the task.

4.2.2 Benefits of Authentic Assessment

In responding to how authentic assessment is beneficial in the teaching and learning arena over conventional assessment, the following are the participants' views:

ETS1G7 emphasises:

AA makes learning fun, with active class, unlike with conventional assessment where the teacher would spend time controlling learners' unwanted behaviors, as learners did not have much to do.

ETS1G6 notes:

For conventional, a teacher delivers content to learners without exploration, they are channeled while with AA learners explore to develop critical thinking.

Likewise, CETS2G6 citing an example asserts:

In the absence of the teacher, learners wouldn't do anything by themselves but with AA learners learn on their own. For example, they can do unfinished work such as

drawing. Teachers collaborate to help one another..., with concepts hard or tricky for them to deliver.

CETS2G5, also English teacher, differentiates:

AA is broad, assesses learners based on their daily life experiences, and discussions are held collaboratively by the learner and the teacher, while conventional is narrow, and concept-based, learners have to memorize concepts.

MTS1G7 postulates:

With AA, a teacher assesses an individual learner based on his or her ability while for conventional, a learner is assessed based on how others have performed, that is, comparing the performance of a learner to that of other learners.

Conversely, ETS2G7 posits:

There is no big difference because we assess learners to pass with both traditional and AA. AA in the delivery of new curriculum is characterized by content that is at a higher level to learners' capabilities, demanding the use of unavailable resources.

The findings reveal AA as a strategy that encourages independent learning, creating disciplined learners, and less distraction as they are entirely occupied with activities, including hands-on activities, such as year-round projects in CE. The implication is that they are committed to their learning without the teachers' pressure, learning is driven by them. It can therefore be concluded that learners are intrinsically motivated to learn. The findings that learning focuses on each learner's capabilities, mark evidence with recent reforms as learners are admitted into the next level (from primary to secondary) even before issuing results, based on what they can do, unlike in the past, where scores were compared.

The discoveries further disclose the practice of new methods as enforcing colleagues to assist one another, while learners become one another's mentors as they exchange knowledge and skills amongst themselves. Hence, unlike in conventional assessment where the teacher is the master of all during teaching, with AA a learner's voice is valued. Accordingly, in AA learners are engaged with the teacher in the construction of a scoring assessment tool (rubric) to assess their work, which

with the paper and pencil method they were never privileged to be part of the plan for assessment. Planning assessment with learners which teachers were not observed practice.

4.3 TEACHERS' APPLICATION OF AUTHENTIC ASSESSMENT METHODS

Given the understanding of AA, the study sought to explain how teachers use AA in three subjects namely: mathematics, English, creativity and entrepreneurship, and the following are the findings.

4.3.1 The use of authentic assessment in Mathematics.

Asked how they apply AA in their teaching of mathematics,

MTS1G6 states:

Learners can apply knowledge of Mathematical concepts acquired in primary schools in secondary, I got feedback from learners in grade 8. I am also able to pick individuals on whatever problems they encounter and then revisit them.

MTS2G7, on the other hand, explains:

AA methods make teaching easy as learners gain better knowledge because what they learn at school is what they already apply at home. This means teachers' work is to categorize it accordingly. For instance, calculating profit and loss in buying and selling transactions.

In contrast MTS1G7 argued,

It takes a longer time, and much time is consumed teaching using AA. However, every learner is participating, hence, I can identify where a learner has a problem in working with mathematical concepts.

The implication of teaching using AA appears to enforce sustainable knowledge that is retainable, creating lifelong learners as shown by the findings. It can also be concluded that the teachers' workload decreases as no exhaustive explanations are required, for learners are given a chance to apply the knowledge they have in using AA, with real-life occurrences. Hence, the issue seems to go along with AA's advocacy that a teacher becomes a facilitator. However, participants' expression shows scarce knowledge concerning authentic assessment methods, as the assessment method applied in carrying out profit and loss transactions was not mentioned. As such, according to curricula in primary schools, the AA method applicable in buying and selling activities is a

project, which can either be in groups or individualised. Furthermore, the practice enhances problem-solving skills and higher-order thinking skills, though not mentioned by the participants. For instance, a learner will be required to think critically pertaining choice of goods to sell, to whom, for how much, and why, in carrying out projects as per curricula expectations.

Although the use of AA methods is time-consuming as conveyed in the findings, the effect of demonstrating the workings in dealing with Mathematical concepts help learners not to rely on the end product (the final answer) but rather on the process of how the answer was got. Thus, developing reasoning skills as a learner will tend to do anything for a reason. In addition, as the findings reveal, it is in the process of workings where a teacher detects not only areas to be modified but also learners' strong points.

In exploration of their documentation, participants teaching Mathematics in both schools were reluctant to plan for lessons, hence, no plan for assessment methods which is the focus of the study. As such, for some lessons, they had no lesson plans but rather used the scheme for the concepts to be taught. Requesting on this issue, they claimed to be deprived by lack of time to do some of the procedural activities before actual teaching.

MTS2G6 argued:

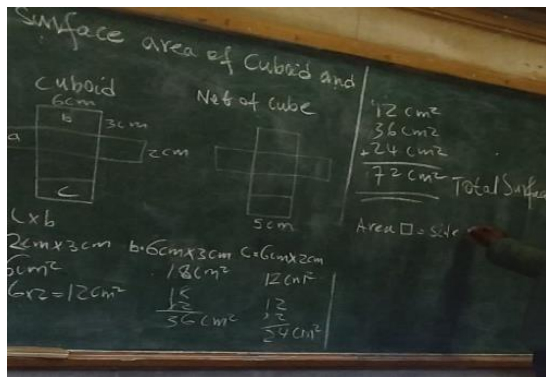
I usually plan for lessons on new concepts for learners or those that could be tricky rather than daily, as this requires thinking, consuming a lot of time which is already limited.

Nevertheless, although almost all of the participants claimed the term authentic assessment to be new, they however, some applied this phenomenon in communicating activities in their teaching through the construction of questions relating to real-world situations. For example, MTS2G6 in her facilitation of ratio and proportion to formulate a word problem, referred to a father who works in the mines coming home each time with presents for his kids, also stating to learners that they will use ratio in their businesses later in life. This mode of assessment as viewed observes integration of subjects mandated by the new integrated curriculum in schools.

MTS1G7 also applied AA practices in her teaching as the lesson resumed with a review discussion on homework given, implying learning becomes a continuous process through which summative assessment is purported for the progression of formative assessment. This is as maintained in the

2009 CAP that with authentic assessment the two assessments should complement each other. Thus, homework as an AA assessment method was used. Next activity, still in the same lesson, learners were tasked in groups which they in turn presented accordingly.

Notwithstanding, some teachers' lessons as observed were mainly teacher-centered instead of learner-centered, as teachers themselves kept on showing workings on the chalkboard, while learners became engaged at the end of the lesson where they were given individualised written classwork. Teacher centered:



This implies that learners are partly involved during the lesson, while most work was by the teacher. This reflects what was remarked in an interview that with old and new curriculum learners are similarly assessed. The workings of the concept taught were all done by him not learners, claiming learners' demonstrations to delay the process as time is limited for accomplishment of heavily loaded syllabus. Hence, the latter reverses back to traditional assessment ways against AA which encourages involvement of learners at all costs in the teaching and learning arena. Thus, practice is remote learning which is mostly summative.

4.3.2 The use of authentic assessment in English

Just as noted by Mathematics teachers, the use of AA created explorative learners whose learning was centered around them through grouping, enhancing competitive spirit, and more dedication for sustainable deepened knowledge and homework to make their findings, whilst some assessment practices were meant to cover up the curricular. In discussions with English teachers about what authentic assessments they employed in their teaching, these were their views.

ETS2G5 pinpoints:

The use of AA helps learners to research... more especially if there is adequate time. I use the discovery method, in teaching English whereby learners are often asked to find from other materials such as newspapers, and passages to find concepts learned in class, like prepositions, etc.

ETS2G6 asserts:

Learners do most work, hence reducing my workload as a teacher. They are highly involved in the lesson and discover about learning concepts which helps activate their understanding in their learning of English.

ETS1G5 postulates:

Grouping has helped learners grasp a better exchange of ideas with others. This helps them with discipline with diverse characters and levels of understanding because they work for their group to be the best ...

ETS1G7 states:

The use of AA has helped me reach most learners within a short period, as I assist a few learners per group unlike in the whole class. Learners learn through their peers making them understand better...

ETS1G6 posits:

It arouses learners' interest because they are free to learn on their own. For example, composition writing promotes critical thinking, helping them live better in the community.

As findings reveal, learners' materials collection was not meant for the next lessons' presentation, but rather completion of prior lessons as being unaware that with current innovations where assessment drives teaching and learning practices. Reflecting on their practices teachers concentrate more on teaching methods and less on assessment methods. Thus, the use of the internet (YouTube) to administer pronunciation can be employed for authenticity from native speakers.

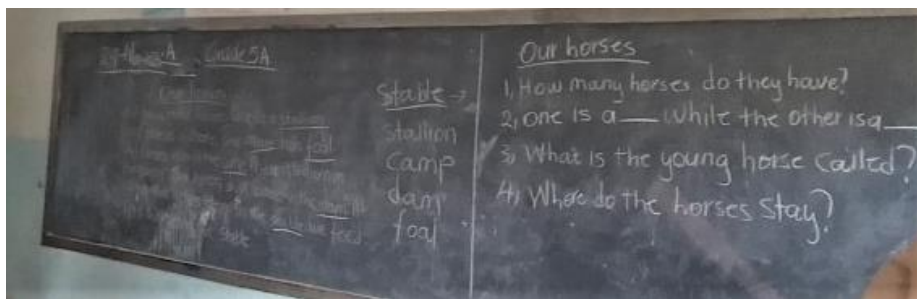
Subsequently, learning by discoveries could be viewed as one that assists learners in selling their knowledge or ideas to others in schools through debates and in society gatherings. As such, as their eagerness advances, they may become producers according to their talents. All these as viewed could be contributory to economic development. Thus, as asserted by AA that learning should not end with classroom issues but be relative to and applicable to the entire society in answer to their needs.

One could view the competitive spirit as enhancing learners' persistence and motivation in their learning, thereby becoming active participants as advocated by AA. Notwithstanding, creating a child-friendly school as the learning environment becomes conducive, catering to everyone's needs.

Although participants view essay type as advantageous, none of them was observed teach compositions yet it is a factor underlying authentic assessment to deepen learners' higher order thinking skills but focused on recall-based items. Teachers have not taught it throughout the grades, as revealed by the findings. The rationale for exclusiveness of these concepts in their teaching is to be detailed in the interpretation of observations and document analysis categories.

Observations with an English class, teachers seemed to rely on lower order questions as shown below.

Comprehension questions:



In requesting why items were at one level of understanding, she said:

I want learners to be aware of information to their level of thinking.

Yet, lower-order questions tend to deprive learners of the acquisition of higher-order thinking skills.

Findings of studies by Raselimo and Mahao (2015) and Hayati et al (2017) also show that teachers mostly practiced cognitive domain. In some circumstances as observed, what participants said during the interview merged with their class practices. For instance, ETS2G5, in a lesson on reading for understanding picked a text from some other books, besides textbooks. However, the text was written on the chalkboard for learners to access, which delayed the process of teaching. Inquiring why the text was not multiplied

(photocopied) for each learner. The response was *“There are no funds, as most learners are orphans, with disadvantaged parents who cannot provide for their needs as required.”*

On a follow-up question on how one-to-one text would enhance learning or develop learners’ skills. She said:

When learners have materials within reach, they play around with them, exchanging roles, taking turns playing the teacher’s role asking one another questions even during leisure time....

Hence, the practice, relating to AA would enhance peer assessment through roleplay for deeper comprehensive knowledge. Therefore, the conclusion could be drawn that some teachers in schools do have brilliant ideas for the effective application of AA, although restricted by a shortage of resources.

Further observations with ETS2G5, reading for understanding was practiced in which learners had to pick new words from the factual text as identified and give meaning in context, while with another participant ETS2G6, learners edited their own text by critically assessing the text to identify grammatical mistakes. With this, self-assessment is practiced, although the participants could not tell or did not know about these AA methods. In addition, both ETS1G5 and ETS1G6 also applied AA using questions in their teaching, reflecting learners’ daily living consistently asking them the ‘when’, ‘how’, and ‘why’ questions to come up with their own sentences.

However, as earlier found that essay types were not incorporated, I therefore had to check their documentation. The table below displays findings from both schools 1 and 2 on document analysis by grades based on composition and letter writing as a concept for the application of authentic assessment.

Grade	Documents analysis	
	<i>Scheme and record of work done</i>	<i>Lesson plan</i>
Grade 5	The concept is not schemed nor recorded	Not planned for teaching
Grade 6	Concept schemed but not recorded as done	Not planned for teaching
Grade 7	Concept schemed but not recorded as done	Not planned for teaching

The participants' responses to the follow-up question; of why they were not teaching essay writing are as follows:

Grade 5 teachers said it would be included in the quarters to follow due to time constraints, which could be believable. Nevertheless, an introspection with the next grades, their views varied some claimed the COVID-19 break has negatively hindered the teaching of some concepts, while the ETS1G6 response was:

I am still drilling tense and sentence construction to enable learners to indulge in composition and letter writing.

On the other hand, ETS2G7 stated:

ECoL has eliminated the writing of compositions and letters in the final assessment for learners at primary level, so teachers find it a waste of time, focusing on content not included in the final exam.

This contradicts the curriculum designers' plan of including the concept in the curricula, informing to application of authentic assessment in teaching. This aligns well with what one of the participants contented in an interview that the way learners are assessed with both prior curricula

which count on paper and pencil assessment methods and the interim curriculum which authentic assessment is to assess, is the same, as pertains to the practices therein.

4.3.3 The use of authentic assessment in Creativity and Entrepreneurship

Whilst in Mathematics and English participants were observed to mostly rely on the use of conventional assessment strategies and rare application of authentic assessment in their teaching, this contrasts with CE whereby they seemed to apply authentic assessment strategies. Below are their views.

CETS2G6, concerning CE says;

As CE mostly relies on hands-on activities, it has promoted independence and selfreliance in learners. Learners are no longer dependent on the teacher to create items or their parents to earn their living as they sell items...

CETS1G7, similarly noted;

Responsibility is developed during learning from the teachers' assistance in the teaching of CE, as I incorporate every learner, individually or in groups.

CETS2G5 states:

My teaching with the use of AA has become more effective, as it has led me to use trips, whereby learners sometimes go out to inquire about certain concepts in the community or within the school, either in groups or individually.

CETS2G7:

It helped me to identify learners according to their talents, and what they can do best, she said. For example, as a CE teacher, I have discovered that some are mostly good at drawing, so, they help me in constructing teaching aids.

She emphasized further by saying:

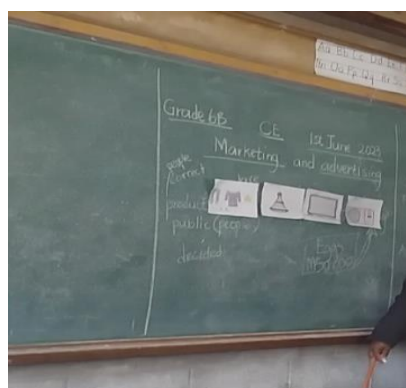
This also guides me in helping learners about career choices in furthering their studies.

In contrast, the CETS2G7 teacher contends:

There are no teaching aids, so I am unable to assess CE authentically because they have not been taught authentically, hence, leading me into using telling methods.

Teachers were unsure about the evaluation techniques they employed to verify that students had learned the necessary knowledge and abilities, even though they were instructed to seek out information. It seems that they did not know enough about assessment practices to adequately include them in their instruction. For example, not a single participant brought up the usage of rubrics as a tool for self- or peer assessment while evaluating students' work. However, participants appear to use AA approaches more often in CE than in Numerical and Mathematical (NM) and Linguistic and LiteracyEnglish (LLE) learning areas, which may be influenced by the project-based end-of-level exam mode of assessment. Nevertheless, there were issues such as a shortage of specific resources that limited the procedure. The utilisation of learners following their talents, as recommended by AA, was demonstrated during observation when CETS2G5 made use of student-designed images.

Learner-prepared teaching materials:



This exemplifies the use of AA in which assessment drives the curriculum as the skill acquired during learning is applied to the upcoming lesson, making learning a process.

Otherwise, CE teachers often referred to learners' future life expectations in developing their businesses, and commonly indulged in projects by learners, although the assessment was not accurately maintained. Although they could not list certain assessment methods, they were observed to use some of them. Below are some learners' displayed project works, implying the application of some AA methods. Display of learners' produced products



However, they did not experimentally collaborate with learners to design a rubric for assessment. Thus, the rubric is not effectively engaged by teachers, as they often assess the project items at their completion stage, not step-by-step. However, some other practices empowering learners' autonomy in learning were engaged. Amongst others, CETS2G6 who is also an English teacher made learners use their dictionaries to find by themselves meanings of new terms and concepts. In this instance, self-assessment is maintained, creating independent learners as they may no longer account on the teacher for their learning, but rather a consultation of available resources.

Notwithstanding, as earlier conveyed in interviews it appears that teachers lack content knowledge or do not plan for lessons well in advance as they often rely on the usage of textbooks, which constrained the use of AA to assess learners. For instance, in a CE class, using textbooks, one participant coming across a new concept said: "I will google to find what this is all about".

Furthermore, with the CE learning area as detailed in the observation section, participants have not shown a systematic plan to assess learners' projects, by any rubric design for assessment of learners' produced items during teaching, as discussed earlier, or written in their lesson plan books.

4.4 ASSESSMENT OF TEACHERS' USE OF AA

Certain attempts in using AA were loadable while some were worrisome. In a chat about their success in implementing authentic assessment, they raised their concerns:

MTS1G6 claims:

There is success, though there have been breaks which include COVID break and teachers' strikes, so we are struggling to chip in.

ETS1G5 maintains:

To a limited extent due to a lack of resources and skills, our own designed drawings for teaching aids are not accurate and, hence, can mislead learners.

ETS2G5:

Not very much, our success rate is not even 50% it ranges at 30% or less because the resources are not available. Asking for resources from learners of parents who cannot provide basic human needs is not promising, she argued.

Likewise, MTS1G7 contends:

They're not adequately applied due to lack of teaching aids and a teacher-pupil ratio which is not to the required standard.

Not much because the implementation activities therein require a smaller number of learners whilst in our school there are high numbers of learners per stream and a lack of resources, argued CETS2G5.

While ETS1G6 indicates:

Taking it from what you said about AA, it is partially done because I was not even aware of it.

Additionally, ETS2G7 stated:

I have succeeded in applying it though not fully.

As a follow-up, I asked her what helped her succeed, and she said:

I attended training by the ministry, which I can detect some engaged activities to relate to AA, although they were not based on AA.

MTS2G6 remarks:

Greatly succeeded as I use it more often, particularly in the teaching of sets in which learners role-play as elements of sets themselves, for instance, according to their villages or belongings.

ETS2G6 points out:

There is success through the use of teaching methods that involve learners....

Similarly, ETS1G7 notes:

Yes, there is a success because learners' performance has improved through the use of AA in my class.

Most participants, as discovered in the study have applied AA to a certain extent due to reasons including high pupil-teacher ratio, lack of skills, and support materials to implement authentic assessment. Owing to underdeveloped countries such as Lesotho, success in implementing innovations as planned is unsuccessful due to aspects that remain unchanged for efficiency and effective implementation. As revealed by the findings pupil-teacher ratio remains the same (high), yet with new strategies a small number of learners is required. Hence, teachers as implementers in class, are overwhelmed and remain incapable, unable to meet required standards due to the large number of learners under their supervision in a classroom.

However, none of them mentioned the use of assessment methods to have aided their success in the implementation of AA, instead highlighted the use of teaching methods. An implication is that teachers need to be equipped with skills on how to utilize assessment strategies to drive teaching and learning activities.

In discussing obstacles that come their way restricting the use of AA, they conveyed their views:

There is a high need for resources, such that teachers use their cell phones whose data is bought by them, posits, ETS2G5.

Likewise, ETS1G5, MTS1G7, and ETS1G6, content that there are no teaching aids but teachers rather improvise, and use their own money to buy data for teaching some concepts, impacting their application of AA to a limited extent.

Moreover, CETS2G6 illustrates:

Parents are unable to support schools or learners with required teaching aids, mostly in CE, for example, paints.

Additionally, CETS2G7 also points out:

For projects like nail painting, we are obliged with learners to take trips to view this equipment because they are not there in schools.

Furthermore, CETS2G5, concerning lack of human resources notes:

We get minimal support resources to apply authentic assessment, as the usual support we get is from other teachers who may master certain concepts, which we often invite to assist with concepts such as music in CE.

While English and Mathematics teachers improvised and used cell phones in the absence of resources applicable, all CE teachers have shown the learning area to entirely demand resources which some of them require funds to buy, as some of them cannot be improvised.

Otherwise, ETS1G7 indicates:

Since there are no readily available resources besides textbooks, learners and teachers construct teaching materials. Notwithstanding, the only available tool attained by fundraising is the speaker used to make records via Bluetooth for learners to learn...

MTS2G7 ventures:

Resources are available, that is, most of them as there is a Maths and science kit, in which only a few are unavailable. However, the readily designed charts for Mathematics do not cover all the topics as required.

As mentioned, there are kits in schools, teachers as observed do not use available resources in their teaching because maybe they do not plan well in advance to be informed of which teaching materials to prepare before the lesson. For instance, there are models of solid shapes in the Maths kit, but one participant was observed teaching a topic on solid shapes without models. An implication is that they fail to bring reality into the classroom and, hence, fail to practice AA. One may conclude that teachers become obstacles at times by ignorance and, thus, do not apply the phenomenon as required.

However, a notable example that emerged during observations, negatively impacting on time factor, is of shortage of Mathematical instrument sets as learners exchange the available instrument sets throughout classes 5, 6, and 7 which causes a chaotic situation. Thus, daily distribution and collection consume a lot of time while at times some pieces are missing. Notwithstanding, having planned to use them in the lesson, and they are in use in the next grade, causing inconvenience. Consequently, the teacher demonstrates the skill that learners are deprived immediate practice of, impeding the effective application of authentic assessment.

Almost all the participants have stated a shortage of resources, including human resources, as some concepts require specialised skills or talents, to remain an obstacle to their implementation of authentic assessment. Thus, the use of cell phones with their data can negatively impact their application of AA, because in case they do not have data learning could be faulty in some way.

The challenge of lack of resources has forced school's principal in school 1 into raising funds to buy some resources to enhance teaching, in addition to what the government supplies to schools. Thus, as observed, the sort of modification for the application of authentic assessment is to be discussed in the sub-section below.

4.5 CLASSROOM ADAPTATIONS OF IMPLEMENTING AA

Conversing about modifications they adopted in their classes for the use of AA, their responses were:

MTS1G6:

The seating arrangement had to be changed in my class to help learners learn at their own pace, for confidence and self-reliance.

Additionally, ETS1G7 also indicates:

While alteration on sitting arrangement has been done for activities, I mostly use teaching materials to modify my lessons.

Similarly, ETS1G6, specifies:

I sometimes sent some learners outside to perform certain activities. I also use cell phone for digital teaching aids.

On the other hand, MTS2G6 posits:

As Mathematics and science teacher, some concepts require the use of digital resources unavailable in our school, hence, for modification in my lessons as required, I organized a trip to Lesotho College of Education (LCE) for my grade 6 learners to explore and access the resources...

Learners no longer rely only on textbooks in class, but other learning materials engaged for them to be openminded, for example, story books, urges ETS2G5,

The participant further states:

Unlike the use of chalkboards for teaching and learning, learners are seldom given handouts to fill in or diagrams to label parts. However, it becomes difficult in our schools because these are not affordable for learners... She justified.

Both ETS2G7 and CETS2G7 claim to often make learners collect and create teaching materials for use during lessons.

CETS2G5 clarifies:

I had to use different teaching materials, some of these are pasted on the walls for learners to refer to.

On the follow-up question: who made them?

Some are designed and collected by learners, particularly in recycling and reusing topics in CE.

Through experience as a teacher, one can extensively explain the significance of arranging learners by making them sit next to peers of their caliber to enhance interrelatedness and a conducive learning environment for competence in their learning. The practice strives for equivalent responsibility on their work, unlike if mingled with highly competent peers, whereby low performers tend to look up to them, particularly if assigned to work in groups, hindering their thinking capability.

One may argue that these challenges add to the limited use of AA, as the use of cell phones may not be as effective as the use of computers with broad screens for clearer exploration. Meaning learners do not have access to the usage of digital resources. Nevertheless, computer accessibility remained ineffective as at LCE, about ten learners clustered around per computer as observed for use. Also, because the event is a onceoff, learners may have not acquired skills as expected.

This could relate to the notion about AA, that it increases learners' performance by ensuring equitable learning opportunities and outcomes for all learners. Thus, learners who cannot cope with verbally offered content may do with role-play activities. The use of learning aids that are of learners' interest could motivate and generate higher-order thinking. Thus, if they come across a text on any form of media, even at home, they may read it for a purpose, hence, self-assess, while making learning a continuous process, enhancing autonomy.

It could be maintained through the findings that not only a teacher should decide and avail the teaching aids but learners as well, both are to play a role. Thus, with AA cooperation amongst stakeholders in the learning arena is encouraged.

ETS2G6 illustrates:

I have put into practice test-retest to assess learners. For example, if they wrote a test and performed badly, I make them re-write it sometime later (after a week) without any alterations on the items.

MTS1G7 & CETS1G7 teacher:

I include every learner in every activity conducted and they sometimes work in groups or individually.

I vary teaching methods. For example, question and answer and roleplay to help learners take part in their learning, contented MTS2G7.

While ETS1G5 argued: *I employ actions in my teaching for deeper understanding because if they did not grasp something verbally, in action they will.*

As stated above teachers seem to be fond of teaching methods as compared to assessment methods. This is because, about strategies used to facilitate learning, only teaching strategies are considered

in the list. Overall, the study's findings reveal alteration in the sitting arrangement as a leading factor towards the application of AA in creating a conducive learning environment, promoting interrelationships amongst learners as they collaborate through working in groups. Participants noted the incorporation of various learning materials, although not accessible to every learner. Hence, some of them are collected by learners and improvised instead of relying on textbooks. However, few of the participants indicated the use of authentic assessment methods for modification in their teaching, implying a need for training about the utilisation of AA strategies.

4.6 TEACHER PREPAREDNESS TO USE AUTHENTIC ASSESSMENT

4.6.1 Teacher training for the use of AA

In answer to what training they got, the participants' views varied as some attended pieces of training and others never. Their views are as follows:

I was trained by NCDC in collaboration with ECoL on how to construct items, in their discovery that teachers make long stems that lead learners astray.... MTS1G6.

ETS1G5 and ETS2G7: claim to have attended a workshop on integrated curriculum by NCDC, which mainly focused on how to draw a lesson plan and how to scheme.

CETS2G5 further elaborates:

I was minimally trained within a short period with a lot of information to grasp and process (a week) workshop on the implementation of the new curriculum.

ETS1G7 also indicates:

I engaged in integrated curriculum training by NCDC. Although they did not mention the term "authentic assessment" in their training, the activities enclosed some AA aspects taking from what you said about AA.

On the findings, only one amongst several participants ever attended a core-joint workshop by NCDC and ECoL, which one could consider the most valuable in informing teachers of implementations of innovations such as AA, as with both the focus could be two-way, thus; curricular content delivery and application of assessment methods.

While some participants were trained by NCDC, some were never. Their views are presented below.

In divergence, ETS2G6 asserts:

I was never trained by NCDC but learned about it in one of the modules on assessment and evaluation at the National University of Lesotho (NUL) during my first degree.

Likewise, MTS1G7 also contends:

No training by NCDC but got highlighted about AA in courses during honors at NUL.

ETS2G5, ETS1G6, and CETS2G7: Claimed to have never been to any training by MOET; hence, AA is a new concept altogether.

However, MTS2G7 opines:

No, I have never been in a workshop but the curriculum activities and resources we use drive us into practicing AA in our teaching to assess learners.

Although institutions do highlight teachers who initiatively further their studies into degree courses, only a few have an interest in enrolling due to the government's suspension of automatic promotion, so teachers are discouraged, no matter how useful. No matter what hints they got elsewhere, teachers require training from developers of the innovations.

In response to whether their training had been sufficient for them to use AA. They responded:

ETS1G5 goes on to say:

The training I got was to a limited extent because as teachers we need refresher workshops to deepen what we acquired in starter workshops.

Likewise, ETS2G7 stated:

The workshop was not based on AA, but on how to implement the new curriculum about lesson planning and scheming, whilst the assessment methods used were the old ones, not the new term "authentic assessment".

Similarly, participants who claimed to have never been to any of the training's contend:

I am not fit enough; I still need training as I have never been to any workshop or taught on this phenomenon in institutions that I attended, CETS2G5.

MTS1G7 argues:

The training is not sufficient but highly needed as I did not attend any training pertaining implementation of integrated curriculum either, besides it being taught to us as a subject at NUL.

The need for training on authentic assessment when teachers had been workshopped on new curriculum implies loopholes that need to be filled because AA as an assessment method recognised as worth assessing the interim curriculum, should have been amongst specifics in issuing workshop contents about the implementation of the integrated curriculum.

Relating to the training they still need to execute authentic assessment. Their views were put forth as follows:

We need to be equipped with skills on how to present our lessons authentically so that we can assess learners accordingly based on how AA should be conducted MTS1G7 opines.

School-based workshops are needed along with district workshops for a broader exchange of ideas amongst teachers, adds MTS1G6.

ETS2G5 explains:

We should be trained from scratch, all teachers from spheres of this country, as teachers are clueless about AA.

CETS2G5, also insists:

Refresher workshops should be run to help us discover where we are right or wrong in our delivery, that is schools should be revisited to check whether teachers are on track or not.

Similarly, ETS2G6, ETS1G6, and ETS1G7: also, raised concern for more workshops.

Teachers' views underlying their training relate to reduced preparedness by the ministry to equip them with skills required for implementations of educational innovations such as AA for the study meant to assess the integrated curriculum, to minimize heavy dependence on paper and pencil assessment. Contrasting to the rest of the participants, ETS1G5, argues.

No training is needed but rather resources like human resources, as there is too much paperwork per teacher... or otherwise exchange of roles.

It can be learned from the findings that the supply of resources should be accompanied by proper training for usage. For instance, some teachers are computer illiterate, hence, personnel eloquent in such fields should be employed in schools to assist. Moreover, for both the trained and the untrained participants, assessment is about asking learners questions either orally or written, despite their meaningfulness or relatedness to the real world. This means the training workshops for curriculum implementation overlooked the issue of assessment. One could conclude that teachers perform assessment practices driven by their own choices or interests. Hence, all teachers require training for effective implementation of AA as can be planned by the stakeholders concerned. This is because even the workshop attendants seem to have attained inadequate guidance.

4.7 SUMMARY OF FINDINGS

The study aimed at finding how teachers use authentic assessment about their competence in their teaching with some primary schools in Maseru. The findings demonstrate teachers as inadequately trained to use AA in their teaching due to certain factors as revealed through interviews, lesson observations, and analysis of teachers' preparation books. The foremost obstruct is teachers' lack of skills emanating from unpreparedness to apply AA. Teachers appeared to use AA only because some activities embedded in the new curriculum embrace AA. Nevertheless, AA as indicated by workshopped interviewees was neither addressed nor contextualised during informative workshops for new curriculum delivery, making the privileged to be those who were oriented during degree courses. Thus, both the supply of usable resources and human resources are insufficient for the application of AA.

Findings from observations, showed some modification in assessing learners, such as timed learner activities, and minimal generalised comments on learners' works, while on the other hand, teachers carried the activity with learners observing and responding verbally to the posed questions. Thus, unaware, teachers applied certain AA methods in their teaching. As such, some teachers have derived means for time limitation to apply authentic assessment while others opted for the heavy use of teacher-centered assessment methods to economise on time. This may imply a need for

collaboration so that teachers exchange ideas as to how they overcome obstacles that come along for effective use of AA for learners' achievement.

Furthermore, findings from analysis of teachers' books revealed that teachers rarely plan for assessment in reviewing their lesson plan books. They also do not regularly plan, and if there is a plan to disseminate the lesson, it is incomplete, with identified gaps being mostly on the portion for assessment method. This says teachers indulge in lessons not even knowing the assessment method to use to drive learning activities because for them the usual detailed assessment plan lies with the evaluation part at the end of the lesson. Meaning paper and pencil assessment strategies still overwhelm the use of alternative methods. Hence, in planning for teaching they did not show a plan for assessment criteria to provide learners to assess their work, while none of the participants ever included a rubric for assessment of learners' projects. Viewing the record of work done for any authentic assessment method most had not recorded, those who did were to a certain extent, as the comment section was usually not filled, on weaknesses encountered, or strategies to employ to overcome the undesirable impact.

CHAPTER 5: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The current study sought to explore teachers' perception of real assessment and the extent to which they use it to improve their instruction. The study was guided by three research questions. In this chapter, I first summarise the preceding chapters and then discuss the findings of the study as guided by the research questions. Then, conclusions and recommendations are drawn from the findings.

5.2 SUMMARY OF THE STUDY

Chapter 1: The study discussed AA as a learner-centered assessment strategy that maintains knowledge development and skill acquisition through the formulation of meaningful tasks that depict real-life occurrences, requiring in-depth thinking capacity. Whilst prioritizing on the involvement of a learner at all costs in the teaching and learning arena, the adoption of AA equals a focus on learning and thus teachers playing a role as a facilitator and not just imparting

knowledge. Authentic assessment requires investment of large resources to implement and is best adopted in developed countries. The least developed countries such as Lesotho recently adopted AA and are struggling to implement it. The chapter narrowed on the problem for the study namely, teachers' lack of skills to apply AA usually results in their use defensive or teacher-centred approaches which mere focus on passing content without much learning. Three objectives and/ or research questions were the object of the study.

Chapter 2: The study used constructivism as its lenses. Based on the problem identified for the study, constructivism helps assess the suitability of AA adopted by the Lesotho CAP. This is because constructivists argue that knowledge or learning is constructed by the learner, either mentally or through social interactions. The central argument with AA is that it is the most viable method of assessment because it incorporates both formative and summative assessment activities.

Chapter 3: This chapter expounded on the preferred methodology and methods for generating and analyzing data to address three research questions. A qualitative and interpretivism paradigm was found to be suitable for generating data from semi-structured interviews, observations, and document analysis with a sample of 13 were purposively selected teachers. The participants were primary school teachers teaching grades; 5, 6, and 7 from selected schools in the district of Maseru, Lesotho. Data were analysed using thematic analysis.

Chapter 4: Guided by constructivism and an interpretive paradigm, The findings are as; unpreparedness for implementation of educational reforms, shortage of resources particularly digital and unavailability of facilities, congested classrooms, teachers' inadequate knowledge and skills to apply AA, due to insufficient training, teachers' preference of paper and pencil based assessment, unclear policy on how innovations such as AA should be applied, lack of collaboration amongst stakeholders (NCDC and ECoL) in planning and designing practices for effective implementation of AA.

5.3 DISCUSSIONS OF FINDINGS

The findings of the study are discussed under three main themes as noted below:

5.3.1 Teachers' understanding of authentic assessment.

The concept of AA is defined in literature globally as an assessment method that measures students' ability to apply knowledge and skills to solve problems in the real world (Hu, Lee & Harji, 2023).

From the global research, the following are the key components of AA, formulation of meaningful tasks for learners to perform activities that are interesting and learner-centered, and acquisition of skills such as problem-solving (Aziz, Yusoff & Yaakob, 2020; Frey et al., 2012; Kinay & Bagceci, 2016; Koh, 2017;

Mueller, 2018; Sridharan & Mustard, 2016). The current study found that teachers' perceptions of AA were varied. Some viewed it as demanding on time, unavailable resources, and effort whilst not suiting to learners' thinking capabilities, others were observed to improvise and engage in items and activities related to societal happenings as a means to engage principles of AA. From the findings, it can be argued that teachers seem to misunderstand AA, as they could not engage some elements of AA, such as higher-order thinking skills.

When teachers are unclear about a policy concept they must implement, they rely on teacher-centered methodologies (Lesitsi, 2022). Basically, the lack of understanding of AA has previously been linked to failure to describe the overall aspects of CAP (Lesitsi,

2022). The study also found the lack of common understanding of AA may result from NCDC's improper training on new reforms. Importantly, some participants in the study had never heard about AA, while others could link practices engaged in the workshop about the integrated curriculum to inform AA, with a few having heard of the phenomenon during professional development with some institutions of higher learning. The findings revealed that teachers are unaware of documentations that inform educational reforms. Participants in the study did not have an idea of a curriculum and assessment policy booklet that is detailed about changes in the education system, informing stakeholders including teachers as main implementers at the classroom level of what is expected of them. Notwithstanding, the CAP is not detailed with the description of how the phenomenon should be applied, meaning even if they read about it in the CAP, they could still not relate to how it is done, implying vague understanding.

It is argued in the study of McFeetors, Marynowski and Candler's (2021) that a teacher can stimulate the mathematical thinking levels of learners by using AA. However, the current study found that teachers' assessment mode is influenced by the content delivered which is against the principles that assessment practices should unfold to teaching and learning activities. A teacher may be unable to stimulate the mathematical thinking while using pencil and paper approaches

which dominated the thinking of participants in the current study. Teachers' understanding of AA remains inadequate as their explanations seem to be based on the learning and teaching practices employed. Thus, their practices in the learning and teaching situation seemed to often resume heavily with content delivery, then tasks for learners to perform, for which most items were not formulated by them but picked from textbooks. Hence, these were characterized by mostly lower-order forms, which do not promote learners' deeper thinking, as advocated for by AA.

Additionally, in evaluating items that were constructed by the participants only a few of the participants considered that they were related to real-world occurrences, but heavily relied on recall-based questions. However, AA advocates for tasks that replicate realworld situations (Shorna, 2017). Further, Lowma-Sikes' (2020) study found that learners' best performance was determined by the teachers' effort to create meaningful tasks and assistance on how they should be carried out. Therefore, when the teachers' understanding of AA is inappropriate, they are incapable of helping learners perform better.

Although participants could not define the phenomenon, some surprisingly applied it in their teaching, through the practice of collaborative teaching and learning, they exchanged ideas on some concepts if the need arose within themselves and made learners find some information through the use of certain resources such as dictionaries as revealed by the findings. The inference is that they use AA in their teaching for curriculum delivery, although unaware. However, factors prevail in schools as revealed by findings, that hinder teachers' use of AA, such as lack of funds to provide for required resources. This as demonstrated by findings included the buying of data and some other teaching materials to facilitate assessment, particularly in CE concepts such as manicure and pedicure tools for demonstrations and administration of assessment.

While some countries thrive in technological use by learners, others suffer the accessibility consequences. A study on the use of AA in the United States - Washington showed learners hard at work on their digital products while the instructor keeps an eye on them (Lowma-Sikes, 2020). This implies that learners have access to cardinal resources while in underdeveloped countries learners are denied access. Unlike the country above, learners in Lesotho do not have access to digital tools but rather use information from written documents such as newspapers if not textbooks as observed with the current study. In the extreme, some learning outcomes were left unattended

because there were no support resources, particularly digital devices. Hence, technological practices are studied theoretically. These include computer-based learning outcomes such as the use of spreadsheets, formulation of designs, and painting. This aligns with observations by Raselimo and Mahao's (2016) study that digital resources are lacking in African countries, which still prevails even today in primary schools in Lesotho. This impacts negatively on teachers in the practice of some skills with learners. Thus, a leading factor to their misunderstanding to apply AA for curriculum delivery.

The current study found that some participants asked questions throughout the lesson despite some not challenging learners adequately with problem-solving skills. This is consistent with Villarroel, Melipillan, Santana and Aguirre's (2024) study which showed that problem-solving was not assessed by instructors in secondary vocational education or higher vocational education. The current study also discovered that while teachers completed the majority of the work, students were less involved in assessment procedures. Similarly, very few teachers in South Africa were found by Kanjee's (2020) study to be actively involving students in formative assessment.

Moreover, participants' responses did not reflect any preparation of a plan for assessment with learners as authentic assessment requires intensive planning. Involvement of learners in this regard could enhance their motivation for task accomplishment, while also generating higher thinking skills. The issue as stated by Frey et al (2012) that designing authentic assessment tasks should be done collaboratively by both parties in the learning arena. Thus, affirmed by Shorna (2017) that alternative assessment test formats are timeconsuming. This is noted that authentic assessments require a list of activities such as reading, researching, and preparation of original products, hence, viewed to be tough (Lowman-Sikes, 2020). Similarly, in the current study participants were reluctant to construct items of higher order, with thinking that they could be problematic for learners at their level to cope with. It may be concluded the participants seemed unaware that a skill not earlier practiced could be harder to acquire with later stages. This could therefore rank their understanding of the phenomenon as shallow.

Teachers also seemed to be uninformed of the importance of feedback in facilitating AA as they did not consider it in suggesting the best ways to use AA in their teaching. The current study found that feedback practices heavily relied on teachers, not learners. Yet, with AA learners are to get

feedback from their teachers, peers and themselves to improve on their performance for stages to follow (Huyen, 2017). Observations during teaching also showed the provision of feedback not addressing individual learners' weaknesses; It was a general comment to the whole class on their shortcomings. Hence, learners were seldom granted opportunities to comment on the works of their counterparts. Villarroel et al. (2024) show a trend toward the use of written and group feedback rather than individual and dialogical input, although the study was based on secondary and higher vocation education. On the other hand, studies in Lesotho indicate teachers have not practiced commentary feedback (Khechane, 2016; Lesitsi, 2022).

5.3.2 Teachers' application of authentic assessment

Research on classroom use of AA indicates that teachers must provide feedback and guidance to assist learners in comprehending and applying what they learned for the exploration and discovery of new knowledge and ideas (Hu, Lee & Harji, 2023). According to Diaz (2017), the constructivist way of applying AA in Mathematics focuses on knowledge that is actively used to create new knowledge rather than knowledge that is retained in learners' brains. The implication is that learners should actively participate rather than be passive receivers of knowledge conveyed to them. The current study found that teachers generally apply conventional methods to cover up content. In Mathematics lessons the current study found that teachers themselves demonstrated the workings with minimal involvement of a learner because following procedural working steps is lengthy.

This does not conform with AA, which maintains that learning must be carried by learners. Constructivist learning theory therefore maintains that learning happens when students create concepts and conduct research (Saleem, Kausar & Deebea, 2021). Vintere (2018) asserts that applying AA in mathematics is best demonstrated by making solid judgments and tying instruction to real-world situations rather than focusing solely on abstract formulas. The current study found that to some extent teachers did apply AA to societal life/situations in their teaching, with topics such as ratio, while for some concepts such as calculating area, they relied on the utilization of formulae. Implying that they are not competent enough to apply AA across topics.

With regards to the AA in Commercial and Entrepreneurial (CE) studies Weng, Chiu and Tsang (2022) view lessons as typified by real problem-based methodologies through phases of investigation, elucidation, and evaluation. Meaning, CE lessons are characterized by research

projects. The current study found that a few teachers engaged learners in discovery learning and the construction of teaching aids. Observations of lessons noted that some teachers indulge learners in projects in which produced items were seldom displayed. In these lessons critical and creative thinking were insufficiently employed. This contradicts the findings from the literature on the use of AA in the subject.

The results show that teachers generally used knowledge-based questions to assess students, which preserves recollection, suggesting that their use of AA appears to rely more on traditional methods of assessment than authentic assessment. One could describe the norm as an aid for time management to cover curricula content and work strain, as they are quick to facilitate due to the high learner-teacher ratio ever experienced in Lesotho primary schools since the introduction of FPE. Due to the sheer volume of students, there is evidence that teachers have a propensity to favour memory by using closed-ended questions because they are simpler to review (Villarroel, et al., 2024).

Participants in the study reflected knowledge of some authentic assessment methods as they were observed teaching. However, certain methods such as self-assessment, and portfolio assessments were not on the list, yet, a portfolio serves a significant role in determining learners' performance, conveying what strategies and activities to employ for learners' achievement. Thus, Mueller (2018) contents that tests and quizzes could serve as effective complementary factors to AA in determining acquired knowledge through the use of a portfolio. Thus, the focus should be on detailing learners' progress over time instead of comparing learners' performances (Shorna, 2017).

Notwithstanding, the learners' products through projects for skill acquisition, were not kept to regulate and maintain their levels of improvement. An implication is that, for them, assessment ended with each produced item, yet, in the implementation of AA, learning has to be a continuous process. Similar findings were made by Aziz (2019), who discovered that primary school instructors in Malaysia lack guidelines for the use of authentic assessment in the classroom. Furthermore, in Lesotho, the study by Chere-

Masopha and Mothetsi-Mothiba (2022) showed teachers' varying knowledge of portfolios, as teachers from some universities seemed to practice it as opposed to those trained in the country. However, with the current study teachers trained within the country (honors degree holders) had

an idea of AA in contrast to those with similar degrees trained elsewhere. An implication that teachers' knowledge can vary accordingly per training institutions they attended.

Peer assessment, as demonstrated in the study was applied to a certain extent as learners were seldom asked to comment on one another's project, whilst they were never provided with marking criteria to assess such works. A consequence of less attention on the learner. As a result, it is justified that even though authentic assessment promotes a learner-centered approach, this assessment technique is still not well applied (Aziz, 2019). In addition, the findings of the current study demonstrate that teachers did not collaborate with learners in developing the marking criteria, but, rather commanded learners orally what to look for. And this occurred at the completion of the task provided, not during the learning process. This could imply teachers' misunderstanding that assessment enhances learning as a process not mainly as a product. In essence, providing learners with marking criteria helps them to self-assess throughout while carrying a task, serving as a reprimanding reference to them.

Furthermore, the rubric that comes along with the assessment package for assessing learners' projects is not effectively nor systematically used by teachers. The current study found that the participants' practices of considering only the total mark, as observed, instead of assigning scores in stages of performance to enhance formative assessment. They facilitated assessment on the end product assessing the completed item, making summative assessment priority over formative assessment. The practice could be seen to contradict what is mandated in CAP that formative and summative assessments should be exercised to complement one another (MOET, 2009). Additionally, Vero and Chukwuemeka (2017) emphasize the practice of balanced assessment both formative and summative of importance, as relying solely on one result in students' accomplishments being ambiguous. Therefore, the above could be evidence that elementary teachers still rely on traditional ways of assessing learners in contempt of authentic assessment, as they still focus on the end-product instead of a process, regardless of the benefits entailed in AA. McFeetors et al. (2021) prove performance assessment which is the AA method as enabling process-oriented tasks where students actively demonstrate their Mathematical thinking and multifaceted. Similarly, as observed by Shorna (2017) performance assessment requires learners' commitment on time and effort.

Moreover, in observing their teaching, participants demonstrated uncertainty in their teaching of some concepts in the CE learning area. One may conclude the incident to be out of unpreparedness to plan for the next lesson or otherwise, lack of content knowledge. The aforementioned could be found to be similar to findings of research elsewhere, although in another subject, which revealed teachers to lack content in Mathematics (May, 2015).

However, irrespective of constraints experienced participants in the study positively perceive the application of AA to be of benefit in the teaching and learning arena as the practices therein result in improved learners' performance. Likewise, Lowman-Sikes's (2020) study's findings also confirm the significance of AA as benefiting learners because concepts require exhaustive preparation by learners themselves hence, attained knowledge can be retained versus, pencil and paper whereby time-to-time revision should be maintained for retrieval of gained information.

Overall, viewing aspects in the study's findings, it can be argued that assessment done through the final assessment, meant to bridge learners into grade 8, tends to determine for teachers the forms of assessment methods and activities to apply in their teaching, for curriculum delivery. For instance, with the CE learning area, because the final assessment is project-based, teachers' assessment tasks and teaching activities are basically projects throughout grades. In contrast, in English, as the last assigned assessment by ECoL excludes essay writing, teachers did not administer the assessments nor teach the phenomenon as mandated by curriculum developers (NCDC). Therefore, the latter results in insufficient training, to be discussed in the section below, as the two stakeholders seem to have not adequately collaborated about the implementation of the innovations thereof.

5.3.3 Teachers' training in applying authentic assessment.

Studies by Chere-Masopha and Mothetsi-Mothiba (2022), Lesitsi (2022) and Lowman-

Sikes (2020), argue for the importance of teacher effectiveness in AA as linked to their training. The current study found that none of the thirteen teachers felt they were adequately trained on the application of AA in their lessons. It was found that participants only participated in two-day training when the new curriculum started and there were no further trainings. Teacher training is heavily linked with better knowledge and effective application of AA (Lowman-Sikes, 2020). So,

given the finding that perceptions of AA were not accurate, and observed applications fell below required standards for the three subjects, it can be argued that teachers were not satisfactorily trained.

While most teachers were never trained on how to use authentic assessment in their teaching to assess the integrated curriculum, some associate it with activities engaged in workshops about the new curriculum, while a few only heard about it during their professional development with some institutions of higher learning. An implication is that teachers have not attained maximal training from stakeholders concerned, for them to implement AA. Teachers' views on their training revealed that it is inadequate because some essential components such as authentic assessment were not highlighted during training workshops meant for the assessment of the interim curriculum, despite the fact stated that the interim curriculum should, amongst others, be assessed through authentic assessment (MOET, 2009). The findings confirm Chere-Masopha and MothetsiMothiba's (2022) study that teachers lack sufficient training. The same finding was made by Lesitsi (2022).

Furthermore, students' claims that teachers grade for creativity contrast with content, is stated to demonstrate that teachers' training for utilization of AA was inappropriate (Lowman-Sikes, 2020) research conducted in Washington. The study in play found that workshopped teachers lacked uniformity in their perception, perhaps because they attained training from different trainers. The way they drew lesson plans differed even though they mentioned planning for lessons to have been a gist in workshops for implementation of the interim curriculum, meaning delivery to unattended would be improper. Similarly, Lesitsi's (2022) research findings in secondary schools also indicate a challenge for teachers to deliver what they attained in workshops in their teaching.

5.4 CONCLUSIONS

5.4.1 Research question one

Question one focus request was teachers' understanding of authentic assessment. Teachers were unfamiliar with authentic assessment; they could not define it and rather insisted that they should be informed of the phenomenon first, as they claimed it to be new to them. Their understanding of authentic assessment is to a limited extent as most were able to say something about it only after discussions. In providing the meaning of

AA, some kept on saying: “As you said...” referring to my description of the phenomenon to them. However, they maintained the understanding that with AA learners acquire skills as opposed to conventional assessment which focuses on recall-based knowledge, on memorized facts. Therefore, the study concludes that although teachers seem to positively perceive AA as of benefit in enhancing learners’ achievement compared to conventional assessment, they do not understand what AA expectations are. Hence, their understanding of AA does not help them implement the CAP as they are not well informed of the how part of the implementation. Furthermore, the phenomenon was not effectively employed due to some constraints such as lack of time, shortage of resources and facilities, lack of knowledge to apply AA, and congested classrooms.

5.4.2 Research question two

The requirement for question two was about teachers’ application of AA methods in their curriculum delivery. Some authentic assessment methods were applied by teachers, whilst some were not effectively used, such as portfolio, due to teachers’ lack of knowledge, as less emphasized by trainees’ trainers. However, many of the teachers often applied observation methods in assessing learners’ works, while a few rarely utilized self-and peer assessment strategies. Individualized projects were also engaged throughout grades for curriculum delivery, although the rubric to assess them was not systematically followed. Homework was also applied to serve as the next lesson’s introduction, by certain participants. Implying that regardless, of the heavy utilization of paper and pencil methods, some AA methods were profitably employed. Owing to the findings above teachers’ use of authentic assessment in their teaching remains ineffective.

5.4.3 Research question three

Question three requested for teachers’ views about their training to implement authentic assessment. It was found that the training workshops were conducted to brief teachers on the implementation of an integrated curriculum. However, these are claimed to have been insufficient as they were once-of and particularly focused on how to draw lesson plans, with a limited number of teachers oriented therein. As a result, they were not satisfactorily equipped to deliver it to colleagues. Notwithstanding, some phenomena such as authentic assessment were not highlighted in such training. As a result, teachers are found to remain incompetent in applying AA in their teaching. Hence, a conclusion can be reached that inadequate teacher training impedes implementations of AA in Lesotho.

5.5 LIMITATIONS OF THE STUDY

The study paid attention to certain grades, yet AA is inevitable to assess integrated curriculum in all grades. A larger picture of the efficiency and effectiveness of utilization of AA in primary schools should be conducted for generalizable results, as with the present study, findings are not generalizable due to the smaller population entertained.

5.6 RECOMMENDATIONS

The Ministry of Education in training teachers on new educational reforms should work collaboratively with other bodies within the ministry. Thus, curriculum developers, examination councils, and academic institutions for teachers to be better informed as main implementors. The teacher training institutions' subjects' specialists would be for content empowerment per learning area. In formulating the policies, the ideas should not just be introduced and abandoned. As in analyzing CAP, authentic assessment is simply stated without explanation of how it should be incurred.

Teacher training institutions, as revealed in the study that teachers attained knowledge of the phenomenon during their degrees, say to institutions, AA should be incorporated/embedded in teacher courses starting with diplomas as starter courses.

In response to innovative teaching and learning, teaching materials should be supplied in schools as AA is resource intensive, to merge practices of these newly introduced assessment methods to assess the interim curriculum. Support measures or materials already in schools should be revised to minimize much improvisation that prevails in schools to account for time constrictions.

The government is to provide primary schools with resources that cannot be improvised such as computers, renovations, additional classrooms, and laboratory facilities for conducive application of AA activities.

Principals should initiate teaching materials to assist teachers' implementation of AA, that is, seek for resource persons should be by them.

Parents need to be formally informed of innovations by schools in advance to provide support where required.

Benchmarking should be practiced amongst teachers for the exchange of ideas, as shown by findings that some have an idea about AA from institutions.

In case teachers are setting questions themselves instead of utilizing items from the assessment frameworks, as they are more often not fond of using them, they should collaborate in the construction of items in assessing learners to execute AA in their teaching. Principals should be obligated to check such works for loopholes so that all thinking levels are encompassed.

Further studies can be focused on learners' views on the application of the phenomenon to accomplish their learning.

REFERENCES

A List of References

- Adams, W. C. (2015). Conducting semi-structured interviews. In Wholey, J. S., Hatry, H. P & Newcomer, K. E (Eds.), *Handbook of Practical Program Evaluation* (4th ed.). Washington: Jossey-Bass.
- Aisya, S. & Hikman, M. H. (n.d). Teacher's perception of authentic assessment in English teaching in elementary school. *The 2nd International Conference on Language, Literature and Teaching*.
- Akaranga, S. I. & Makau, B. K. (2016). Ethical considerations and their applications to research: A case of the university of Nairobi. *Journal of Educational Policy and Entrepreneurial Research*, 3(12), 1-9.
- AL-Ababneh, M. M. (2020). Linking Ontology, Epistemology and Research Methodology. *Science and Philosophy*, 8(1, 75-91. DOI: 10.23756/sp. v8i1.500
- Aliningsih, F. & Sofwan, A. (2015). English Teachers' Perception and Practices of Authentic Assessment. *Journal of Language and Literature*. <http://journal.Unnes.ac.id>
- AL-Shehri, M., Otoum, A. & AL-Magableh, M. (2015). The range of availability and practice of authentic assessment competencies for intermediate stage teachers in Sharurah Governorate. *Journal of Education and Practice*, 6(32).
- Al-Saadi, H. (2014). Demystifying ontology and epistemology in research methods. <https://www.researchgate.net/publication/260244813>

- Alzahrani, I. & Woollard, J. (2013). The role of the constructivist learning theory and collaborative learning environment on wiki classroom, and the relationship between them. *3rd International Conference For e-learning & Distance Education*.
- Al-Zoubi, S. M. (2019). Classroom authentic assessment strategies and tools used by English teachers in Jordan. *International Journal of Language and Linguistics*, 6(4). doi:10. 30845ijll.v6n4p5
- Amua-Sekyi, E.T. (2016). Assessment, student learning and classroom practice: A review. *Journal of Education and Practice*, 7 (21).
- Ardianti, T. M. & Mauludin, L. A. (2017). Students' responses on the application of authentic assessment in EFL reading class. *Journal of English Language, Literature and Teaching*, 1(2). DOI: <http://dx.doi.org/10.31002/metathesis.v1i2.470>
- Arhim, A. K. (2015). The Effect of Performance Assessment-Driven Instruction on the Attitude and Achievement of Senior High School Students in Mathematics in Cape Coast Metropolis, Ghana. *Journal of Education and Practice*, 6(2).
- Arhin, D.et al.(2021). Teachers Perception and Practices of Authentic (Performance-based) Assessment at the Basic School Level in Ghana. *International Journal of Advanced Research (IJAR)*, 9(40), 617-624. DOI: 10.21474/IJAROI/12739
- Asare, E. (2020). Basic Teachers Perceptions and Practices of Formative Assessment in the Cape Coast Metropolis of Ghana. *JAEPER*, 5(1).
- Aziz, M. N. A., Yusoff, N. M. & Yaakob, M. F. M. (2020). Challenges in using Authentic Assessment in 21st century ESL Classroom. *International Journal of Education (IJERE)*, 9(3), 759-768. DOI: 10.1159/ijere. v9i13.20546.
- Aziz, N. M. B. A (2019). A case of using authentic assessment in project-based learning in excellent teachers' English classrooms. *Doctor of Philosophy*. Universti Utara Malaysia.
- Blake, B. & Pope, T. (2008). Developmental psychology: Incorporating Piaget's and Vygotsky's theories in classrooms. *Journal of Cross-Disciplinary Perspectives in Education*, 1(1), 5967.
- Bodner, G. M. (1986). Constructivism: A Theory of Knowledge. *Journal of Chemical Education*. DOI: 10.1021/ed063p873
- Bonache, J. & Festing, M. (2020). Research paradigms in international human resource management: An epistemological systematization of the field. *German Journal of Human Resource Management*, 34(2), 99-123. DOI:10.101177/2397002220909780
- Bores-Garcia, D., Hortiguera-Alcala, D., Gonzalez-Calvo, G & Barba-Martin, R. (2020). Peer assessment in physical education: Review of the last five years. *Sustainability*, 12, 9233; doi:10.3390/su12219233

- Bozkurt, G. (2017). Social-constructivism: Does it succeed in reconciling individual cognition with social teaching and learning practices in mathematics? *Journal of Education and Practice*, 8(3).
- Brookhart, S. M. (2018). Appropriate criteria: key to effective rubric. *Front. Educ.* <https://doi.org/10.3389/educ.2018.00022>
- Brown, G. T. L. (2019). Is Assessment for Learning Real Assessment? *Front. Educ.* <https://doi.org/10.3389/educ.2019.00064>
- Brown, S. (2019). Developing authentic assessment for English language teaching: A theoretical view. *The International Journal of Language and cultural*, 1(1), 12- 24.
- Campbell, s., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D. & Walker, K. (2020). Purposive sampling: Complex or simple? Research case examples. *Journal of Research in Nursing*, 25(8), 652-661, doi: 10.1177/1744987120927206
- Casteel, A., & Bridier, N. L., (2021). Describing Populations and Samples in Doctoral Student Research. *International Journal of Doctoral studies*, 16, 339-362. <https://doi.org/10.28945/4766>
- Chavalala, D. (2015). The Role of School Assessment Teams in Quality Assurance of English First Additional Language Assessment Practices in Primary Schools. University of Pretoria.
- Chere-Masopha, J. & Mothetsi-Mothiba, L. (2022). Teachers' experiences of using a portfolio for teaching, learning, and assessment in Lesotho primary schools. *Cogent Education*, 9:1, 2023969, <https://doi.org/10.1080/2331186X.2021.2023969>
- Clarke, V. & Braun, Y. (2017). Thematic Analysis. *The Journal of Positive Psychology*, 12(3), 297-298. <http://dx.doi.org/10.1080/17439760.2016.1262613>
- Creswell, J. W. (2014). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. (4th ed.). SAGE Publications, Inc.
- Creswell, J. W. & Creswell, J. D. (2018). Research Design Qualitative, Quantitative and Mixed Methods Approaches. (5th ed.). United States of America: SAGE Publications, Inc.
- Crotty, M. (1998). The Foundations of Social Research: Meaning and Perspective in Research Process. KHL Printing co. Pte Ltd Singapore.
- Curriculum and Assessment Policy Framework, (2009). *Ministry of Education and Training*.
- Dandis, M. A. (2013). The Assessment Methods that are used in a Secondary Mathematics Class. *Journal for Educators, Teachers and Trainers*, 4(2), 133-143.
- DeLuca, C. Rickey, N. & Coombs, A. (2021). Exploring Assessment Across Cultures: Teachers' Approaches to Assessment in the U.S., China, and Canada. *COGENT EDUCATION*, 8(1). <https://doi.org/10.1080/2331186x.2021.1921903>

- Diaz, L. D. E. (2017). The teaching and learning process of mathematics in primary education stage: A constructivist proposal within the framework of key competences. *INTERNATIONAL ELECTRONIC JOURNAL OF MATHEMATICS EDUCATION*, 12(3), 709-713.
- Dougherty, M. V. (2021). The use of confidentiality and anonymity protections as a cover for fraudulent fieldwork data. *Research Ethics*, 17(4), 480-500. DOI: 10.1177/17470161211018257
- Double, K. S., McGrane, J. A & Hopfenbeck, T. N. (2020). The impact of peer assessment on academic performance: A meta-analysis of control group studies. *Educational Psychology Review*, 32, 481-509. <https://doi.org/10.1007/s10648-019-09510-3>
- Dung, Q. L. & Ha, D. T. N. (2020). Portfolio-an alternative form of assessment in EFL context. *International Journal of Scientific and Research Publications*, 9(1). DOI: 10.293222/IJSRP.9.01. 2019.p8557
- Ekawati, D. (2017). The Implementation of Authentic Assessment in Vocational High School 1 Kuala Cenaku. *1st English Language and Literature International Conference (ELLiC)*. Universitas Pendidikan Indonesia.
- Elkatawneh, (2016). Comparing Qualitative and Quantitative Approaches. *SSRN Electronic Journal*, DOI: 10.2139/ssrn.2742779.
- Etikan, I., Musa, A. S. & Alkassim, R. S. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1-4. doi: 10.11648/j.ajtas.20160501.11
- Fatonah, S., Suyata, P. & Prasetyo, Z. K. (2013). Developing an Authentic Assessment Model in Elementary School Science Teaching. *Journal of Education and Practice*, 4(13).
- Frey, B. B., Schmitt, V. L. & Allen, J. P. (2012). Defining Authentic Classroom Assessment. *Practical Assessment, Research & Evaluation*, 17(2).
- Gemma, R. (2018). Introduction to positivism, interpretivism and critical theory. *Nurse Research*, 24(4), 41-49.
- Ghaicha, A. (2016). Theoretical framework for educational assessment: A synoptic review. *Journal of Education and Practice*, 7(24).
- Glacer, N. (2014). Formative Plus Summative Assessment in Large Undergraduate Courses: Why Both? *International Journal of Teaching and Learning in Higher Education*. <http://www.isetl.org/ijtlhe>
- Goundar, S. (2019). *Cloud computing: Research methodology*. <https://www.researchgate.net/publication/333015026>

- Gunasekara, C. (2017). Enabling Authentic Assessment: Essential Role of information Literacy. *Journal of Australian Library and Information Association*. 66:4,393-405. DOI:10.1080/24750158.2017.1399014
- Haidari, S. M. & Karakus, E. (2019). An Introduction to Authentic Assessment and its Implication in Teacher Education. *Conference paper*. <https://www.researchgate.net/publication/350467120>
- Harlen, W. & Johnson, S. (2014). A Review of Current Thinking and Practices in Assessment in Relation to the Primary Years Programme. *Report*, Assessment Europe.
- Harrison, H. Birks, M. Franklin, R & Mills, J. (2017). Case Study Research: Foundations and Methodological Orientations. *FQS* 18(1).
- Heitink, M.C., Van der Kleij, F. M., Veldkamp, B. P., Schildkamp, K. & Keppers, W. B. (2016). A Systematic review of prerequisites for implementing assessment for learning in classroom practice. *Educational Research Review*, 17, 50-62. <http://dx.doi.org/1016/j.edurev.2015.12.002>
- Hayati, A., Bentri, A. & Rahmi, V. (2017). Analysing the Issues in the Implementation of Authentic Assessment in the 2013 Curriculum. *AL-TA, LIM Journal*, 24(1), 53-57. <http://dx.doi.org/10.15548/jt.v24.1.2>.
- Hodgman, M. R. (2014). Using authentic assessment to better facilitate teaching and learning: The case for student portfolios. *Journal of Studies in Education*, 4(3). <http://dx.doi.org/10.5296/jse.v4i3.6149>
- Hu, J., Lee, P. G. & Harji, M. B. (2023). Designing authentic assessment tasks for EFL courses. *CLE*. <https://doi.org/10.105/shsconf/202316801025>
- Huyen, T. T. H. (2017). Authentic Assessment in Pedagogy-related Modules in Teacher Education: Vietnamese Student Teacher' perspective. *Thesis*. University of East Anglia School of Education and Lifelong Learning.
- Kadhim, A. J. (2020). An Assessment of Teaching Strategies in UK and Iraq. *Al-Bayan Center for Planning and Studies*. <https://www.researchgate.net/publication/347849737>
- Kanjee, A. (2020). Exploring Primary School Teachers' Use of Formative Assessment Across fee and no-fee Schools. *South African Journal of Childhood Education*, 10(1), 1-13. DOI: 10.4102/sajce. v10i1.824
- Kankam, B. et al. (2015). Teachers' Perception of Authentic Assessment Technique Practice in Social Studies Lessons in Senior High Schools in Ghana. *International Journal of Educational Research and Information Science*, 1(4), 62-68.
- Kapsalls, G., Ferrari, A., Punie, Y., Conrads, J., Collado, A., Hotulainen, R., ...Ilyse, P. (2019). *Evidence of innovative assessment: Literature review & case studies* (EUR 29882 EN) Luxembourg: publications office of the European Union. doi:10.2760/552774.JRC118113.

- Khalanyane, T. & Hala-hala, M. (2014). Traditional assessment as a subjective tool in schools in Lesotho. *Educational Research and Reviews*, 9(17), 587-593. Doi: 10.5897/ERR2014.1808
- Khalil, M. K. & Elkhider, I. A. (2016). Applying Learning Theories and Instructional Design Models for Effective Institution. *The American Physiological Society*, 147-156. doi:10.1152/advan.00138.2015
- Khechane, N.C. (2016). Developing a Model for Assessment in Primary Schools in Maseru, Lesotho. *Philosophae Doctor Educationis*, Central university of Technology, Free State.
- Kinay, I. & Bagceci, B. (2016). The Investigation of the Effects of Authentic Assessment Approach on Prospective Teachers' Problem-solving Skills. *International Journal Education Studies*, 9(8). <http://dx.doi.org/10.5539/ies.v9n8p51>.
- Kippers, W. B., Wolterinck, C. H. D., Schildkamp, K., Poortman, C. J. & Visscher, A. J. (2018). Teachers' views on the use of assessment for learning and data-based decision making in classroom practice. *Teaching and Teacher Education*, 75, 199-213. <https://doi.org/10.1016/j.tate.201806.015>
- Koh, K. H (2017). Authentic Assessment. *Research and Assessment methods*. Doi: 1093/acrefore/9780190264093.013.22. Koh, K., Delanoy, N., Bene, R., Thomas, C., Danysk, G., Hone, G., ... Champman, O. (2019). The role of authentic assessment tasks in problem-based learning. *Papers on Postsecondary Learning and Teaching: Proceedings of the University of Calgary Conference on Learning and Teaching*, 3, 17-24.
- Kouecim, K. (2020). Constructivist theories of Piaget and Vygotsky: Implication for pedagogical practices. *Psychology & Educational Studies*, 13(3), 359-372.
- Kouicem, K. & Nachoua, K. (2016). Constructivist theories of Piaget and Vygotsky: General teaching implications. Retrieved from <http://dspau.univ-elouet.dz>
- Kozulin, A. (Ed.). (2014). *Thought and language*. The Massachusetts Institute of Technology: London, England.
- Lawrence Berkeley National Library. (n.d). Basic vs Applied Research. Retrieved from: <http://www.lbl.gov/Education/ELSI/research-main.html>
- Lestariani, I. Sujadi, I. & Pramudya, I. (2018). The implementation of portfolio assessment by the educators on the mathematics learning process in senior high school. *Journal of Physics: Conference Series*. doi:10.1088/1742-6596/1022/1/012011
- Lester, J. N., Cho, Y. & Lochmiller, C. R. (2020). Learning to do qualitative data analysis: A starting point. *Human Resource Development Review*, 9(1), 94-106. DOI: 10.1177/1534484320903890

- Letina, A. (2015). Application of Traditional and Alternative Assessment in Science and Social Studies Teaching. *Croatian Journal of Education*, 17(1), 137-152. Doi: 10.15516/cje.VI7i.1496.
- Levers, M. (2013). Philosophical paradigms, grounded theory, and perspectives on emergence. *SAGE Open*, 1-6. DOI: 10.1177/2158244013517243
- Lopez-Pastor, V. M. Kirk, D. Lorente-Catalan, E. MacPhail, A. & Macdonald, D. (2013). Alternative Assessment in Physical Education: A review of International Literature, Sport, Education and Society. 18(1), 57-76. DOI: 10.1080/13573322.713860.
- Lowman-Sikes, F. J. (2020). Authentic assessment and their impact on engagement of gifted learners in Washington County Public Schools: An action research study. *Doctoral dissertation*. Retrieved from <https://scholarcommons.sc.edu/etc/5997>
- Lubbe, A. & Mentz, E. (2021). 'Self-directed learning-orientated assessment and assessment literacy: Essential for 21st century learning'. In E. Mentz & A. Lubbe (eds.), *Learning Through assessment: An approach towards Self-Directed Learning* (NWU Self-Directed Learning Series volume 7, pp. 1-25). AOSIS, Cape Town. <https://doi.org/10.4102/aosis.2021.BK280.01>
- Mak, P. & Wong, K. M. (2017). Self-regulation through portfolio assessment in writing classroom. *ETL Journal*, 72(1). <https://doi.org/10.1093/etl/ccx012>
- May, B. (2015). An Introduction to the Justification Principle and its Associated Benefits and Challenges Within the Mathematics Classroom. *The Degree of Master of Teaching Department of Curriculum, Teaching and Learning*. Ontario Institute for Studies in Education of the university of Toronto.
- McFeetors, P. J. Marynowski, R. & Candler, A. (2021). Generative unit assessment: Authenticity in mathematics classroom assessment practices. *Educ. Sci.* 2021, 11, 366. <https://doi.org/10.3390/educsci1107066>
- McGrath, C., Palmgren, P. J. and Liljedahl, M. (2019). Twelve tips for Conducting Qualitative Research Interviews. *MEDICAL TEACHER*, 41(9). <https://doi.org/10.1080/o142159X.2018.1497149>
- Maguire, M. & Delahunt, B. (2017). Doing a thematic analysis: A practical, step-by-step guide for learning and teaching scholars. *AISHE-J*, 3.
- Mentz, E. & Lubbe, A. (2021). 'Value of feedback during the implementation of the group individual-group cooperative method of assessment'. In E. Mentz & A. Lubbe (eds.), *Learning through assessment: An approach towards self-directed learning* (NWU SelfDirected Learning Series volume 7, pp. 143-163) AOSIS, Cape Town. <https://doi.org/10.4102/aosis.2021.BK280.07>

- Mitana, J. M. V., Muwagga, A. M. & Seempala, C. (2018). Towards a holistic and relevant educational assessment in primary schools in Uganda. *African Educational Research Journal*, 6(2), 58-68. Doi:10.30918/AERJ.62.18.018
- Mokhtaria, L. (2015). The use of portfolio as an assessment tool. *INTERNATIONAL JOURNAL OF SCIENTIFIC & TECHNOLOGY RESEARCH*, 4.
- Monteiro, V. Mata., L & Santos, N. N. (2021). Assessment conception and practices: Perspectives of primary school teachers and students. *Front. Educ.* <https://doi.org/10.3389/feduc.2021.631185>
- Moria, E., Refnaldi, R. & Zaim, M. (2018). Using authentic assessment to better facilitate teaching and learning: The case for students' writing assessment. *Advances in Social Science, Education and Humanities Research (ASSERHR)*, 148. DOI:10.2991/icla-17.2018.57
- Mueller, J. (2018). Authentic Assessment toolbox. North Central college, Naperville, IL. Retrieved from: jfmuellet.faculty.nocnl.edu
- Mhlauli, M. B. & Kgosiadialwa, K. (2016). The use of a portfolio to enhance authentic assessment among in-service student-teachers in social studies education at the University of Botswana. *Journal of Education and Human Development*, 5(3), 84-96. <https://doi.org/10.15640/jehd.v5n3a10>
- Naser, I. A. S., Arma, I. M. A. & Navi, J. S. I. (2017). The Degree of Faculty's use for Authentic Assessment Tools at Al-Quds University and their Relation to their Attitudes Towards them. *International Journal of Education, Learning and Development*, 5(7), 44-63.
- Nguyen, T. T. K. & Phan, H. M. (2020). Authentic Assessment: A Real-Life Approach to Writing Skill Development. *International Journal of Applied Research in Social Sciences*, 2(1), 20-30.
- Nkhoma, C., Nkhoma, M., Thomas, S. & Le, N. Q. (2020). The role of rubric in learning and implementation of authentic assessment: A literature review. In M. Jones (Ed.), *Proceedings of InSITE 2020: Informing Science and Information Technology Education Conference*, pp.237-276. Informing Science Institute.
- Ozan, C. (2019). Authentic assessment increased academic achievement and attitude towards the educational measurement of prospective teachers. *International Journal of Evaluation in Research in Education (IJERE)*, 8(2), 299-312. DOI: 10.11591/ijere.v8i2.18564
- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N. & Hoagwood, K. (2016). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in mental health*, 42(5), 533-544 doi: 10.1007/s10488-013-0528-y
- Papnithymou, A. & Darra, M. (2019). Defining learner-assessment. *Journal of Education and Human Development*, 8(2), 213-322. <https://doi.org/10.15640/jehd.v8n2a22>
- Parwati, N. W. Suarni, N. K., Suastra, I. W. & Adnyana, P. B. (2018). The Effect of Project Based

Learning and Authentic Assessment on Students Natural Science Learning Outcome by Controlling Critical Thinking Skill. *Journal of Physics: Conf. Series* 1318(2019)012096. doi:10.1088/1742-6596/1318/1/012096

Perry, A. (2013). Preview of Formative Assessment Use and Training in Africa. *International Journal of School & Educational Psychology*, 1(2).
<https://doi.org/10.1080/21683603.2013.789809>

Raselimo, M. & Mahao M. (2015). Lesotho curriculum and assessment policy: Opportunities and threats. *South African Journal of education*, 35(1).

Rashid, Y., Rashid, A. & Warrraich, M.A., Sabir., S.S. & Waseem, A. (2019). Case Study Method: A Step-by-step Guide for Business Researchers. *International Journal of Qualitative Methods*.
<https://doi.org/10.1177/1609406919862424>

Refnaldi, R., Zaim, M. & Moria, E. (2017). Teachers' need for authentic assessment to assess writing skill at grade VII of junior high school in Teluk Kuantan. *Advances in Social Science, Education and Humanities Research (ASSEHR)*, 110. DOI:10.2991/islet-17.2017.32

Rebolj, A. B. (2015). The case study as a type of qualitative research. *Journal of Contemporary Educational Studies*, 28-43.

Reinerman-Jones, L. & Lackey, S. (2011). Basic versus applied research: The final episode! Next season: Transfer! *Theoretical Issues in Ergonomics Science*, 12(5), 395-396.
<https://doi.org/10.1080/1464536x.2011.571433>

Rintaningrum, R. (2008). Constructivist Theory and a Teaching Learning Cycle in English. *Jurnal Sosial Humaniora*, 1(1), DOI:10.12962/j24433527.v1i1.682

Rose, J. & Johnson, C. W. (2020). Contextualizing reliability and validity in qualitative research: toward more rigorous and trustworthy qualitative social science in leisure research. *Journal of Leisure Research*. DOI:10.1080/00222216.2020.1722042

Rosli, R., Mokhsein, S. E. & Suppian, Z. (2022). Classroom assessment practices in Malaysian primary schools: A meta-analysis. *International Journal of Academic Research in Progressive Education & Development*, 11(1), 97-111.
<http://dx.doi.org/10.6007/UARPED/vII-i1/11516>

Rousseau, P. (2018). Best Practices: Alternative Assessments Teaching and Learning office. Retrieved from: <https://www.ryerson.ca/lt>

Saleem, A. Kausar, H. & Deebe, F. (2021). Social constructivism: A new paradigm in teaching and learning environment. *Perennial Journal of History (PJH)*, II(II), 403-421

Samanth, M. (2024). A brief introduction to research methodology. *International Journal of Creative Research Thoughts (IJCTRT)*, 12 (5).

- Sangia, R. A. (2014). English Teachers' Perception to Authentic Assessments. *M. Ed Thesis*. Universitas Negeri Surabaya. DOI:10.17605/OSF.1o/SP8QE
- Schildkamp, K., van der Kleij, F. M. Heitink, M. C., Kippers, W. B. & Veldkamp, B. P. (2020). Formative assessment: A system review of critical teacher prerequisites for classroom practice. *International Journal of Educational Research*.
- Scotland, J. (2012). Exploring the Philosophical Underpinnings of Research: Relating Ontology and Epistemology to the Methodology and Methods of the Scientific, Interpretive, and Critical Research Paradigms. *English Language Teaching*. doi: 10.5539/elt.v5n9p9
- Sefotho, M. M. (2015). A researcher's dilemma: Philosophy in crafting dissertations and thesis. *J Soc Sci*, 42(1,2). 23-36
- Semmar, Y. & Al-Thani, T. (2015). Piagetian and Vygotskian approaches to cognitive development in the kindergarten classroom. *Journal of Educational and Developmental Psychology*, 5(2). doi. : 10.5539/jedp.v5n2p1
- Sethusha, M. J. (2012). An Investigation of the Challenges Affecting Teachers' Classroom Assessment Practices. *Thesis*. University of South Africa.
- Shorna, S. A. (2017). Alternative assessment to assess students: Opportunities and Obstacles. *International Journal of English Language. Literature in Humanities*. V(IX)
- Singh, C. K. S., Lebar, O., Kepol, N., Rahman, R. A. & Mukhtar, K. A. M. (2017). An observation of classroom assessment practices among lectures in selected Malaysian higher learning institutions. *Malaysian Journal of Learning and Instruction*, 14(1), 23-61.
- Sridharan, B. & Mustard, J. (2016). Authentic assessment Methods: A Practical Handbook for Teaching Staff Part I, Deakin University. Doi: 10.13140/RG.2.1.2358.7921
- Stahl, N. A. & King, R. J. (2020). Expanding approaches for research: Understanding and using trustworthiness in qualitative research. *Journal of Developmental Education*, 44(1).
- Starman, A. B. (2013). The case study as a type of qualitative research. *Journal of Contemporary Studies*. <https://www.researchgate.net/publication/265682891>
- Suarimbawa, K. A., Marhaeni, A. A. I. N. & Suprianti, G. A. P. (2017). An Analysis of authentic Assessment Implementation Based on Curriculum 2013 in SMP Negeri 4 Singaraja. *Journal of Education Research and Evaluation*, 1 (1), 38-45. DOI: <http://dx.doi.org/10.23887/jere.v1i1.9551>
- Sukmawati & Zuhairah, F. (2016). Authentic assessment-based showcase portfolio based on learning and mathematical problem solving in senior high school. *Mathematics Science, and Computer Science Education (MSCEIS)* doi: 10.1063/14983941

- Surya, A. & Aman, A. (2016). Developing formative authentic assessment instruments based on learning trajectory for elementary school. *Research and Evaluation in Education*, 2(1), 13-24. doi: <http://dx.doi.org/10.21831/reid.v2i1.6540>
- Sutton, J. & Austin, Z. (2015). Qualitative research: Data collection, analysis, and management. *The Canadian Journal of Hospital Pharmacy*, 68(3), 226-231. doi: 10.4212/cjhp.v68i3.1456
- Suurtamm, C. (2015). Assessment to Promote Mathematics Learning. University of Ottawa.
- Swarooprani, K. (2022). An study of research methodology. *International Journal of Scientific Research in Science Engineering and Technology*. doi : <https://doi.org/10.32628/IJSRSET2293175>
- Syafei, M. Mujiyanto, J. Yuliasri, I. & Pratama, H. (2021). Students' perception of the application of portfolio assessment during the COVID-19pandemic. *Academic International Conference on Literacy and Novelty*, 61-70. Doi 10.18502/kss.v5i7.9320
- Taherdoost, H. (2016). Sampling Methods in Research Methodology; How to choose a Sampling technique for Research. *International Journal of Academic Research in Management (IJARM)*, 5(2). <https://hal.archives-ouvertes.fr/hal-02546796>
- Tortajada-Genaro, L. A. (2022). Mini-cases of professional-inspired activities in e-learning platforms: an experience for the formative assessment. *Multidisciplinary Journal of Educational Research*, 12(1), 13-24. <http://dx.doi.org/10.447/remie.6070>
- Ugwu, C. N. & Eze Val, H. U. (2023). Qualitative research. *IDOSR JOURNAL OF COMPUTER AND APPLIED SCIENCES*, 8(1), 26-35
- Van den Berg, M. E. G., Harskamp, E. & Suhre, C. J. M. (2016). Developing classroom formative assessment in Dutch primary school mathematics education. *Educational Studies*, 42(4), 305-322. <https://doi.org/10.1080/03055698.2016.11>
- Vasileiadou, D. & Karadimitriou, K. (2021). Examining the impact of self-assessment with the use of rubric on primary school students' performance. *International Journal of Educational Research Open*. <https://doi.org/10.1016/j.ijedro.2021.100031>.
- Veldhuis, M., Heuvel-Panhuizen, M. V. D. (2016). Improving classroom assessment in primary mathematics education in the Netherlands. *CERME 9- Ninth Congress of the European Society for Research in Mathematics Education*, 375-381. <https://hal.archivesouvertes.fr/hal-01286850>
- Vero, M. & Chukwuemeka, O. A. (2019). Formative and Summative Assessment: Trends and Practices in Basic Education. *Journal of Education and Practice*, 10(27). DOI: 10.7176/JEP

- Villarroel, V., Bloxham, S., Bruna, C. & Herrera-Seda, C. (2018). Authentic assessment: Creating a blueprint for course design. *Assessment and Design for Higher Education*, 43(5). <https://doi.org/10.1080/02602938.2017.1412396>
- Villarroel, V., Melipillan, R., Santana, J. & Aguirre, D. (2024). How authentic are assessments in vocational education? An analysis from Chilean teachers, students and examinations. *Front. Educ.* 9: 1308688. doi: 10.3389/feduc.2024.1308688
- Vintere, A. (2018). A constructivist approach to the teaching of mathematics to boost competences needed for sustainable development. *RURAL SUSTAINABILITY RESEARCH*, 39(334). DOI:10.2478/plua-2018-0001
- Voinea, L. (2018). Formative Assessment as Assessment for Learning Development. *Journal for pedagogy*. <https://doi.org/10.26755/Reuped/2018.1/7>
- Walden, J. C. (2014). Teacher perception of authentic assessment and student outcome data to inform instruction: A case study of a formative assessment system in a comprehensive high school. *Thesis*. California State University San Marcos.
- Weldeana, H. N. & Sbhatu, D. B. (2017). Portfolio of evidence: An assessment tool in promoting geometry achievement among teacher education college students. *URASIA Journal of Mathematics Science and Technology Education*. DOI 10.12973/Eurasia.2017.01210a.
- Weng, X., Chiu, T. K. F. & Tsang, C. C. (2022). Promoting student creativity and entrepreneurship through real-world problem-based maker education. *Thinking Skills and Creativity*. <https://doi.org/10.1016/j.tsc.2022.101046>
- Winbowo, S., Wangid, M. N. & Firdaus, F. M. (2025). The relevance of Vygotsky's constructivism learning theory with the differentiated learning primary schools. *Journal of Education and Learning (edulearn)*, 19(1), 431-440. DOI:10.11591/edulearn.v19i1.21197
- Wiggins, G. (1989). A true test. Towards more authentic and equitable assessment. *Phi Delta Kappan*, 70(9), 703-713.
- Wiggins, G. (1990). The Case for Authentic Assessment. *Practical Assessment Research & Evaluation*, 2(2).
- Xu, W. & Zammit, K. (2020). Applying Thematic Analysis to Education: A Hybrid Approach to Interpreting data in Practitioner Research. *International Journal of Qualitative Methods*, 19, 1-9. DOI:10.1177/1609406920918810
- Yao, Y. (2015). Teacher perception of Classroom Assessment: A Focus Group interview. *SRATE Journal*, 24(2), University of Central Missouri.
- Yazan, B. (2015). Three Approaches to Case Study Methods in Education: Yin, Merriam, and Stake. *The Qualitative Report*, 20(2), Doi:10.46743/2160-3715.2102

Young, J. C., Rose, D. C. & Mumby, H.S. (2018). A Methodological Guide to Using and Reporting on Interviews in Conversation Science Research. *Methods in Ecology and Evolution*, 9 (1). <https://doi.org/10.1111/2041-210x.12828>.