

**Teachers' application of formative assessment on  
curriculum delivery at selected secondary schools in Leribe**

**By**

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**July 2022**

## DECLARATION

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I declare that the study entitled “Teachers’ application of formative assessment on curriculum delivery at selected secondary schools in Leribe” is my own work. I have duly acknowledged all the sources from which the ideas and extracts have been taken through complete references. The paper is free from any plagiarism and has not been submitted elsewhere for publication.



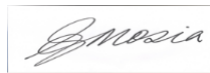
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## CERTIFICATION

This is to certify that this dissertation has been read and approved of as having met requirements of the Faculty of Education at the National University of Lesotho for the award of the degree,  
Master of Education in Testing and Measurements.



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## ABSTRACT

Formative assessment is strongly believed to have a potential to improve learning, hence current education policies worldwide encourage its integration into teaching and learning. This study, therefore, sought to find out how teachers apply formative assessment on curriculum delivery at selected secondary schools in Leribe. Data for the study were collected using qualitative approach in which a case study design was employed. Teachers participated in the study through focus group interviews and classroom observations. Document analysis was used to generate data from learners' scripts and classwork books, teachers' record books and preparation books to complement data from interviews. Data were analysed through Interpretative Phenomenological Analysis (IPA).

The findings reveal that teacher preparation for using formative assessment as underpinned by the Ministry of Education's 2009 Curriculum and Assessment Policy was inadequate due to insufficient training. Therefore, teachers lack understanding of formative assessment, and as a result, they use it ineffectively in teaching and learning. The findings further indicate that teachers' application of formative assessment is highly affected by the examination-oriented culture of the country which is based on summative assessment.

The study therefore concludes that formative assessment is ineffectively applied by secondary school teachers due to limited understanding which results from inadequate training, high pupils-teacher ratio, and pressure put on teachers by examinations to cover the curriculum and to ensure that learners achieve better grades. The study therefore recommends more relevant pre-service and in-service training on the application of formative assessment. MOET should ensure that NCDC and ECoL work together and come up with one goal to avoid conflicting assessment expectations.

**Keywords:** Assessment, Formative assessment, Curriculum Delivery, Secondary schools, Lesotho

## Table of Contents

<b>DECLARATION</b> .....	<b>ii</b>
<b>CERTIFICATION</b> .....	<b>iii</b>
<b>ACKNOWLEDGEMENTS</b> .....	<b>iv</b>
<b>ABSTRACT</b> .....	<b>v</b>
<b>LIST OF FIGURES</b> .....	<b>x</b>
<b>LIST OF ACRONYMS</b> .....	<b>xi</b>
<b>CHAPTER 1: INTRODUCTION AND BACKGROUND TO THE STUDY</b> .....	<b>1</b>
<b>1.1 INTRODUCTION</b> .....	<b>1</b>
<b>1.2 BACKGROUND TO THE STUDY</b> .....	<b>1</b>
1.2.1 The role of assessment in curricula implementation .....	2
1.2.2 Benefits of assessment.....	2
1.2.3 Predicaments associated with assessment .....	3
1.2.4 Forms of assessment .....	3
1.2.5 Global perspectives on the Importance of Formative assessment .....	5
1.2.6 Use of formative assessment in Lesotho .....	8
<b>1.3 STATEMENT OF THE PROBLEM</b> .....	<b>12</b>
<b>1.4 RESEARCH QUESTIONS</b> .....	<b>12</b>
1.4.1 Subsidiary questions.....	12
<b>1.5 STUDY AIM AND OBJECTIVES</b> .....	<b>13</b>
1.5.1 Aim .....	13
1.5.2 Objectives .....	13
<b>1.6 SIGNIFICANCE OF THE STUDY</b> .....	<b>13</b>
<b>1.7 THEORETICAL FRAMEWORK</b> .....	<b>14</b>
<b>1.8 A BRIEF PREVIEW OF THE METHODOLOGY</b> .....	<b>14</b>
1.8.1 Research Paradigm .....	14
1.8.2 Research Approach.....	15
1.8.3 Research Design.....	15
1.8.4 Participant selection.....	15
1.8.5 Data collection tools.....	16
1.8.6 Data analysis.....	16
1.8.7 Trustworthiness.....	16
1.8.8 Ethical considerations .....	16
<b>1.9 LIMITATIONS OF THE STUDY</b> .....	<b>17</b>
<b>1.10 LAYOUT OF CHAPTERS</b> .....	<b>17</b>
<b>1.11 SUMMARY</b> .....	<b>17</b>
<b>CHAPTER 2: THEORETICAL FRAMEWORK AND LITERATURE REVIEW</b> .....	<b>18</b>

<b>2.1 INTRODUCTION .....</b>	<b>18</b>
<b>2.2 THEORETICAL FRAMEWORK .....</b>	<b>18</b>
2.2.1 Constructivism .....	18
2.2.2 Learning-oriented assessment .....	22
<b>2.3 TEACHERS' UNDERSTANDING AND USE OF FORMATIVE ASSESSMENT .....</b>	<b>29</b>
2.3.1 Expected competencies from teachers for effective implementation of formative assessment .....	29
2.3.2 Teachers' utilization of formative assessment strategies to facilitate teaching and learning .....	31
2.3.3 Feedback as a strong pillar of formative assessment .....	32
2.3.4 Peer-feedback .....	35
2.3.5 Peer and self-assessments .....	37
2.3.6 Portfolios on development of learning progress .....	38
2.3.7 Rubrics in deliverance of assessment expectations .....	40
<b>2.4 APPLICATION OF FORMATIVE ASSESSMENT GLOBALLY .....</b>	<b>41</b>
2.4.1 Application of formative assessment in Europe .....	41
2.4.2 Application of formative assessment in Australia .....	42
2.4.3 Application of formative assessment in Asia .....	43
2.4.5 Application of formative assessment in Africa .....	46
2.4.6 Challenges associated with the implementation of formative assessment in Lesotho .....	47
2.5.1 Class size and workload .....	49
2.5.2 Teachers' experiences and Academic qualifications .....	49
2.5.3 Availability of resources .....	51
2.5.4 Teachers' beliefs and societal preferences .....	51
2.5.5 Testing culture .....	52
2.5.6 Teachers' empowerment .....	52
<b>2.6 Summary of the Chapter .....</b>	<b>53</b>
<b>CHAPTER 3: RESEARCH METHODOLOGY AND DESIGN .....</b>	<b>55</b>
<b>3.1 INTRODUCTION .....</b>	<b>55</b>
<b>3.2 RESEARCH PARADIGM .....</b>	<b>55</b>
3.2.1 Ontological and Epistemological assumptions .....	56
3.2.2 Methodological and Axiological assumptions .....	57
<b>3.3 RESEARCH APPROACH .....</b>	<b>58</b>
<b>3.4 RESEARCH DESIGN .....</b>	<b>58</b>
<b>3.5 PARTICIPANT SELECTION .....</b>	<b>59</b>
<b>3.6 DATA COLLECTION .....</b>	<b>61</b>
3.6.1 Focus group interviews .....	61
3.6.2 Observations .....	62
3.6.3 Document analysis .....	63
<b>3.7 DATA ANALYSIS AND INTERPRETATION .....</b>	<b>63</b>
3.7.1 Data analysis process .....	65
<b>3.8 TRUSTWORTHINESS AND TRANSPARENCY .....</b>	<b>67</b>
3.8.1 Credibility .....	67

3.8.2 Dependability .....	68
3.8.3 Transferability.....	68
3.8.4 Confirmability .....	68
<b>3.9 ETHICAL CONSIDERATIONS.....</b>	<b>69</b>
3.9.1 Informed consent .....	69
3.9.2 Do no harm principle.....	70
3.9.3 Confidentiality .....	70
<b>3.10 STUDY LIMITATIONS .....</b>	<b>70</b>
<b>3.11 SUMMARY.....</b>	<b>71</b>
<b>CHAPTER 4: PRESENTATION AND ANALYSIS OF STUDY FINDINGS.....</b>	<b>72</b>
<b>4.1 INTRODUCTION .....</b>	<b>72</b>
<b>4.2 TEACHERS' UNDERSTANDING OF FORMATIVE ASSESSMENT.....</b>	<b>72</b>
4.2.1 The school policies on the role of assessment in teaching and learning .....	72
4.2.2 Teachers' understanding of formative assessment .....	74
<b>4.3 TEACHERS' APPLICATION OF FORMATIVE ASSESSMENT TO FACILITATE TEACHING AND LEARNING .....</b>	<b>78</b>
<b>4.4 TEACHERS' USE OF FEEDBACK AS A TEACHING AND LEARNING TOOL .....</b>	<b>84</b>
4.4.1 Ways of providing feedback to learners.....	84
4.4.2 Application of feedback to monitor learners' progress.....	86
<b>4.5 INFLUENCE OF ASSESSMENT PRACTICES ON CURRICULUM DELIVERY .....</b>	<b>90</b>
4.5.1 Effects of learner teacher ratio and pressure to finish the syllabi on the application of formative assessment.....	95
<b>4.6 TEACHER PREPAREDNESS TO USE FORMATIVE ASSESSMENT.....</b>	<b>97</b>
<b>4.6 SUMMARY OF FINDINGS.....</b>	<b>104</b>
<b>CHAPTER 5: DISCUSSION, CONCLUSION, RECOMMENDATIONS, AND LIMITATIONS OF THE STUDY.....</b>	<b>106</b>
<b>5.1 INTRODUCTION .....</b>	<b>106</b>
<b>5.2 SUMMARY OF THE STUDY.....</b>	<b>106</b>
<b>5.3 DISCUSSION OF FINDINGS.....</b>	<b>107</b>
5.3.1 Teachers' understanding of formative assessment .....	107
5.3.2 Teachers' use of formative assessment.....	108
5.3.3 Influence of assessment practices on curriculum delivery .....	110
5.3.4 Reasons behind teachers' preferences of certain assessment methods .....	112
<b>5.4 CONCLUSIONS .....</b>	<b>113</b>
5.4.1 Research question one .....	113
5.4.2 Research question two.....	113
5.4.3 Research question three .....	114
5.4.4 Research question four .....	114
<b>5.5 LIMITATIONS OF THE STUDY .....</b>	<b>114</b>



<b>5.6 RECOMMENDATIONS.....</b>	<b>115</b>
5.6.1 Recommendations for professional development.....	115
5.6.2 Recommendations for regular inspection .....	115
5.6.3 Recommendation to ECoL and NCDC.....	116
5.6.4 Recommendation for further research.....	116
<b>REFERENCES .....</b>	<b>117</b>
<b>APPENDICES .....</b>	<b>146</b>
<b>APPENDIX 1: FOCUS GROUP INTERVIEW SCHEDULE FOR TEACHERS .....</b>	<b>146</b>
<b>APPENDIX 2: OBSERVATION SCHEDULE .....</b>	<b>148</b>
<b>APPENDIX 3: DOCUMENT ANALYSIS SCHEDULES .....</b>	<b>149</b>
<b>APPENDIX 4: APPLICATION LETTER TO SCHOOLS .....</b>	<b>150</b>
<b>APPENDIX 5: INFORMATION LETTER TO TEACHERS.....</b>	<b>152</b>
<b>APPENDIX 6: TEACHERS CONSENT FORM .....</b>	<b>153</b>
<b>APPENDIX 7: INTRODUCTION LETTER FROM NUL.....</b>	<b>154</b>
<b>APPENDIX 8: CEO-TO-DEM INTRODUCTION LETTER .....</b>	<b>155</b>
<b>APPENDIX 9: DEM-TO-PRINCIPALS INTRODUCTION LETTER.....</b>	<b>156</b>
<b>APPENDIX 10: LETTERS OF ACCEPTANCE FROM SCHOOLS .....</b>	<b>157</b>

## LIST OF FIGURES

**Figure 1:** Principles of LOA

**Figure 2:** Dimensions of LOA

**Figure 4.1:** Formative feedback

**Figure 4.2:** Summative feedback

## LIST OF ACRONYMS

ARC	Advanced Research Center
BERA	British Educational Research Association
CAP	Curriculum and Assessment Policy
COSC	Cambridge Overseas School Certificate
CPD	Continuous Professional Development
DA	Dynamic Assessment
ECOL	Examinations Council of Lesotho
FGD	Focus Group Discussions
ICT	Information and Communication Technology
IPA	Interpretative Phenomenological Analysis
KSAs	Knowledge, Skills and Abilities
L2	Second or Foreign Language
LGCSE	Lesotho General Certificate of Secondary Education
LOA	Learning Oriented Assessment
MOET	Ministry of Education and Training
NCDC	National Curriculum and Development Centre
NUL	National University of Lesotho
O'Level	Ordinary Level
SDG4	Sustainable Development Goal 4
UK	United Kingdom
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Fund
USA	United States of America
ZPD	Zone of Proximal Development

# CHAPTER 1: INTRODUCTION AND BACKGROUND TO THE STUDY

## 1.1 INTRODUCTION

Lesotho and other countries continually seek to improve education quality by focusing more on formative assessment than summative assessment. Summative assessment which education systems have religiously used since the introduction of formal education is now criticized for the harmful effects it bears on learning (Asamoah, Songnalle, Sundeme & Derkye, 2019). Formative assessment as the most preferred assessment, advocates that feedback be provided to both teachers and learners in teaching and learning (Quyen & Khairani, 2017). Teachers, therefore, need to gauge their learners' learning progress and have a clear record of knowledge, skills, and competencies they have acquired and identify challenges they have experienced (Sulaiman, Kotamjani, Rahim, & Hakim, 2020).

Therefore, the current study explored how teachers apply formative assessment to deliver curriculum in secondary schools of Lesotho. This chapter introduces the study by presenting its background, statement of the problem, research aims, and questions, together with the rationale of the study. It then gives a brief description of the theoretical framework followed by the research methodology adopted for the study. Lastly, it presents limitations of the study, gives the outline of chapters and a summary of the chapter.

## 1.2 BACKGROUND TO THE STUDY

The term curriculum attracts a variety of definitions but only two are used to explain how it should be understood for this study and the way formative assessment is used to enact it. Shao-Wen (2012) describes curriculum as a means through which educational goals can be attained while the United Nations Educational Scientific and Cultural Organization (UNESCO) (2013) defines it as the classification of “what, why, and how well students should learn in a systematic and intentional way” (p. 16). UNESCO's definition states that a curriculum gives direction on what must be learned and projects behaviour that must be shown by learners during teaching and learning. In this regard, the curriculum guides teachers on the national education standards that must be attained for learners' development.

On the other hand, assessment is the yardstick that teachers use to measure milestones in curriculum delivery and towards learners' development; hence, the study's focus on the centrality

of assessment in teachers' daily implementation of the curriculum. Udosen (2014) argues that a well-planned curriculum may fail due to, among other factors, poor assessment mechanisms applied by teachers. Therefore, the current study suggests that the success or failure in any curriculum delivery mostly depends on teachers' use of suitable assessment methods in implementing it.

### 1.2.1 The role of assessment in curricula implementation

Assessment is a critical component of curricula enactment. Izci (2016) asserts that learning is best gauged through assessment as the most important measure of learners' development within an education system. As used in this study, learners' performance functions as learners' reaction towards assessment (Haamoonga, 2017), and the extent to which learners have achieved their long-term or short-term learning goals (Arshad, Zaidi & Mahmood, 2015). Due to its power over learning, it is vital to ensure that assessment improves learning rather than hinder it. Bramwell-Lalor and Rainford (2016) see assessment as a vehicle of instruction that enables learners to demonstrate learning and substantiate efforts taken by teachers towards their success. Assessment is further understood as an approach that demonstrates learners' learning progress in relation to learning targets (Ahmedi, 2019; Barzan, 2015; Hung, Hoang Ha & Thanh Thu, 2018), as it accurately collects information related to learning improvement (Swan, 2015). On the other hand, Baleghizadeh and Masoun (2014) view assessment as an independent educational measure imposed on curriculum and learners. These debates put assessment as the crux of pedagogical practices whose benefits need to be unfolded.

### 1.2.2 Benefits of assessment

Assessment helps educational practitioners to measure the attainment of educational goals. For example, it is through assessment that learners with diverse learning needs can also be identified, and objectives developed to accommodate all learners (Bennett, 2015; Ummar, 2018). Most importantly, the provision of grades and learning improvement is vital to assessment as they address learning needs such as learning progress and examination requirements whereby learners are expected to achieve better grades (Izci, 2016; Kemal, 2016). In addition to learning improvement, Shute and Kim (2014) concur that classification, advancement, and placement of learners are at the heart of assessment. Accordingly, assessment can ensure the attainment of all national curriculum standards because the feedback provided on learning can be used to decide which strategies would improve teaching and learning based on what learners are able to perform.

It is imperative for educational practitioners to prioritize the use of assessment on daily instructional practices. Although it is fruitful to all stakeholders, assessment seems to be faced with many challenges some of which are discussed in the section that follows.

### 1.2.3 Predicaments associated with assessment

The implementation of assessment strategies is a challenge in many education systems across the globe. For example, some assessment strategies used by teachers inhibit goal-oriented learning rather than to improve it. Notably, the provision of grades often creates competition among learners and decreases motivational levels of underachievers due to scoring and ranking which are prioritized over other benefits of assessment (Ramokoena, 2018). Assessment which emphasizes grades does not only create competition among learners (Gardner, 2012), but puts more pressure on teachers to teach for examinations rather than to ensure acquisition of knowledge, skills, and competences, because schools mostly associate learners' grades with teachers' level of commitment and subject matter competence. This kind of assessment does not focus on strategies that improve learning (Ramokoena, 2018), but on the strategies such as 'skill and drill' exercises which focus more on what learners should do to meet examinations requirements. Precisely, assessment mediates learning as it determines what students learn and under which strategies. (Ummar, 2018). Owing to how students learn, the next section discusses different forms in which assessment can be undertaken.

### 1.2.4 Forms of assessment

Assessment can address all educational needs if applied differently for specific functions. Therefore, understanding assessment forms enables all stakeholders to critically establish how many skills and competencies learners have acquired. Govender (2019) sees diagnostic, summative, and formative assessments as three major forms of assessment that signify a distinction between assessment roles. Diagnostic assessment is done at the beginning of interaction to determine learners' readiness to learn, including skills and competencies (UNESCO, 2013) that they already have. Summative assessment that occurs at the end of learning (Babincakova, Ganajova, Sotakova & Bernard, 2020; Hung, 2019; Sulaiman et al., 2020; Swaffield, 2011; Vingsle, 2014), is mainly done to rank order students, give them grades and promote them to the next class, and finally for the purpose of certification (UNESCO, 2013).

Formative assessment which this study concentrates on is synonymously called assessment for learning by other researchers (Chen, Kettle, Klenowski & May, 2013; Chng & Lund, 2018; Khechane, 2016; Quyen & Khairani, 2017; Yin & Buck, 2019). However, some researchers distinguish between the roles of the two terms. In any case, both formative assessment and assessment for learning are known with a positive influence they bear over teaching and learning (Chng & Lund, 2018). Ramokoena (2018), on the other hand, argues that formative assessment embodies both the assessment for learning and assessment as learning. Assessment for learning emphasizes the teacher as the one who shares learning goals, assesses learners' progress, and delivers expectations in a student-friendly language (Stiggins, 2017), while assessment as learning emphasizes the learner as the assessor (Ramokoena, 2018). Ramokoena (2018) further explains that assessment as learning and assessment for learning both constitute formative assessment as strategies used for both intersect. The only difference lies where the learners are held responsible for assessing their own progress in assessment as learning, while assessment for learning considers teachers as responsible for assessing learning. Assessment for learning craves for alleviation of student failure (Stiggins, 2017), by enhancing the instructional quality and using assessment results to improve learning by administering immediate feedback (Ramokoena, 2018; Sulaiman et al., 2020).

The fundamental goal of assessment for learning is to create self-reliant learners who can confidently apply skills they have learned from school to address life challenges (O'connor, 2012). The same goal applies to formative assessment, which Popham (2013) defines as a planned process rather than simply an impulsive procedure in which tasks are sporadically assigned to learners. As Popham (2013) explains, a planned process in assessment involves recording all information about learning progress, including objectives and the tasks given to learners, to tell if adjustments are needed in teaching and learning. The major role of formative assessment is to provide instructive feedback to both teachers and learners as it applied concurrently with teaching and learning (Hung et al., 2018; Mehmood, Hussain, Khalid & Azam, 2012; Sulaiman et al., 2020; Swan, 2015; Vjollca, 2019). Condict (2018), on the other hand, sees the role of formative assessment as conceptualizing teaching and learning, and assessment as an integrative process in which assessment is incorporated into teaching and learning. If well integrated, assessment is expected to occur concurrently with teaching and learning. To curriculum delivery, application of formative assessment is a very good move as it is a mutual teaching and learning style (Clark,

2015) through which learners are provided with social and psychological learning opportunities for their growth.

In addition, formative assessment limits learners' dependency on teachers, and emphasizes independent learners who can assess their own progress and seek assistance from their teachers (Barzan, 2015). Asamoah et al. (2019), Hung et al. (2018), and Stewart and Houchens (2014) posit that grading learners' work is of low significance to formative assessment, while the provision of progress levels is the fundamental aspect. Vjollca (2019) also maintains that formative assessment enables teachers to collect and examine all information related to learners' acquisition of knowledge and skills throughout the learning process. Formative assessment is reported to have recently gained supremacy over other pedagogical practices in education settings worldwide (Govender, 2019; Thanh & Renshaw, 2015) because it targets extension of learning intentions over time (Kenna & Russell, 2018). In this regard, it is evident that formative assessment has the potential to enhance the way education systems globally deliver their envisaged curricula efficiently.

#### 1.2.5 Global perspectives on the Importance of Formative assessment

Succeeding its derivation, formative assessment was introduced to education systems many years ago and has recently become a worldwide practice. It was first established and developed in Western countries with most of its key principles obtained under the assistance of scholars in the UK, the USA, and Australia (Chen et al, 2013; Qiuxian, 2017). Specifically, formative assessment evolved from the UK, where it was known as assessment for learning (Chen et al., 2013) and was later adopted by education systems globally (Gikandi, Morrow & Dvis, 2011; Ninomiya, 2016). The implementation of formative assessment is a demanding task that requires more resources and teachers' time in both preparation and application (Can, 2019). The time to observe each learner's progress and provide explicit feedback increases teachers' workload (Khechane, 2016). When teachers are overwhelmed with the workload, effective implementation of formative assessment might be hindered as well.

Generally, most countries are faced with the ineffective adoption of formative assessment due to highly standardized national summative assessments which target low levels of cognitive functioning (Gulikers, Biemans, Wesselink & Van der Wel, 2013). However, many educational problems at the conceptual level are common to countries globally, while classroom practices



vary from one country to another (Ninomiya, 2016; Sayed & Kanjee, 2013). This necessitates discussions on how teachers use formative assessment to deliver curricula in different countries. For example, teachers across Asia seem to have shifted quickly towards formative assessment, but many teachers in African countries, according to Tebeje and Abiyu (2015), easily recline to summative assessment due to inadequate support that education systems provide.

Asia established a strong connection between educational policies and teachers' professional development programmes that have contributed towards teachers' effective adoption of policies into practice. For example, Lee (2014) found that Korean teachers were able to distinguish formative assessment from summative assessment such that they had even shown a wide range of practices and strategies suitable for formative assessment. However, Korean teachers practically use formative strategies to a very small extent and mostly rely on examination-oriented assessment (Noh, Kong & Kang, 2015).

Many challenges regarding the implementation of formative assessment are experienced in some Asian countries. For example, Hong Kong does not distinguish the role of formative assessment from a summative assessment such that teachers use formative assessment only to predict learners' behaviour in summative assessment (Guo & Yan, 2019). The notion is well understood in Vietnam but its application in classrooms is limited as it demands much time on teachers and time to pay attention to each learner's progress (Can, 2019). Chinese contexts culturally appropriated formative assessment such that it is no longer equivalent to what was initially appreciated in western contexts (Qiuxian, 2017) where formative assessment evolved (Chen, Gamble, Lee & Fu, 2020; Llamas-Nistal, Fernández-Iglesias, González-Tato & Mikic-Fonte, 2013). Barriers to effective adoption of formative assessment in China are associated with deeply rooted cultural contexts whereby teachers are the only source of knowledge, and learners as passive listeners must respect teachers by allowing one-way transmission of information (Poole, 2016).

In contrast to Asia, Europe advocated the application of formative assessment in schools through the introduction of policies that would improve formative assessment, though a large number of teachers seem to be stuck in the use of summative activities (Buyukkarci, 2014). Babincakova et al., (2020) note that, summative assessment is given superiority over other assessment mechanisms in many Central- and Eastern-European countries. In addition, formative assessment

mechanisms seem to be rarely applied by classroom teachers as Seden and Svaricek (2018) observed that scoring, questioning, and verbal feedback are frequently applied while self-assessment, peer-assessment, and portfolios are rarely applied. Oz (2014) states that Turkey formulated a policy to respond to a shift in a conceptual framework guiding curriculum and teaching practices towards proper use of formative assessment. The policy position bred a shift in research interests away from summative to decision-maker-centred and to learner-centred assessments such as formative assessments (Choi, Kim & Pak, 2018). However, in Choi et al's view, the application of formative assessment remains a challenge to teachers.

In the United States of America, an interest in formative assessment rose due to learning theories that emphasized the significance of learning other than achievement of better grades (O'Brian, 2013). More research has been done on formative assessment which revealed effective application of formative strategies in the US. For example, Lee, Chung, Zhang, Abedi and Warschauer (2020) reviewed 33 empirical studies which focused on formative assessment interventions. Results of meta-regression analysis unfolded self-assessment ( $d = 0.61$ ) and feedback ( $d = 0.40$ ) among other strategies as critical in improving the effectiveness of formative assessment in US K-12 education. Less emphasis is placed on summative scores, since teachers give priority to the acquisition of skills and knowledge through formative strategies (Chng & Lund, 2018).

In spite some success, some parts of America experience predicaments in the implementation of formative assessment. For instance, the Caribbean education system uses high-stakes examinations as the sole determinant of learners' transition to the next educational level, which forces most teachers to resort to summative assessment (Bramwell-Lalor & Rainford, 2016). On the other hand, Canada gives superiority to certain formative strategies while other strategies remain underutilized by teachers. Volante and Beckett (2011) found that in Southern Ontario peer and self-assessments positively impacted learning progress. This suggests inefficiency in the application of other formative assessment strategies.

In Africa, the notion of formative assessment is well known. For example, UNESCO and UNICEF took initiatives to ensure that Sub-Saharan countries receive education on assessment (Sayed & Kanjee, 2013). Despite the training, the effectiveness of formative assessment is affected by the absence of clear policies relating to its implementation (Sayed & Kanjee, 2013; Tebeje & Abiyu, 2015). Tebeje and Abiyu (2015) further argue that present education policies in

Ethiopia seem to be too general and unclear, with no implementation guidelines. The study found that there was great confusion among Ethiopian teachers on whether to consider formative assessment as central to their teaching.

However, in West Arsi zone secondary schools of Ethiopia, a cross-sectional survey study revealed that some formative assessment strategies are partially practised (Figa, Tarekegne & Kebede, 2020). Teachers in this region occasionally share learning intentions, incorporate formative assessment strategies into pedagogy, and provide instructive feedback (Figa et al., 2020). In Zambia, the government established a pilot programme where teachers were assisted to use formative assessment, but they could not adopt the concept and reverted to their summative assessment practices (Kapambwe, 2010).

#### 1.2.6 Use of formative assessment in Lesotho

In Lesotho, the adoption of formative assessment as a critical aspect of teaching and learning is relatively new. Raselimo and Mahao (2015) indicate that the country established a new reform, Curriculum and Assessment Policy (CAP) in 2009 intended to demonstrate a strong formative assessment system to ensure effective curriculum delivery and improved pedagogical practices. CAP seems to be the founding policy as it denotes a complete shift of curriculum from examination-orientation and subject dependency to learning-orientation wherein assessment is incorporated into pedagogy. Raselimo and Mahao (2015) delved deeply into CAP to establish assumptions underlying curriculum, teaching and learning, and assessment with a major focus on secondary education. They found out that, though the policy opens opportunities for development of learners, its implementation may be mostly challenged.

CAP follows several unsuccessful reforms which ignored the significance of formative assessment as an active tool for effective curriculum delivery. Assessment of curriculum was oriented towards memorization of concepts, where the assessment of learners' acquisition of knowledge and skills was based on the acquisition of content (Raselimo & Mahao, 2015). Learning outcomes were only measured through grading because the results from formative assessment provided no clear record of learners' abilities and incompetence, meaning that learning progress could hardly be measured (Khechane, 2016). For instance, in 1978, a multidisciplinary task force was established, to examine long-term educational policy, delve into the education system by then, and finally, come up with long-term policies that could inform the

education system (Ministry of Education, Sports and Culture, 1982). After the education for development policy, other reforms such as curriculum diversification, core curriculum and O'Level localization were established.

Curriculum diversification reform was established mainly to produce independent and self-sustaining learners through the introduction of practical subjects (Chere-Masopha, Tlali, Khalanyane & Sebatane, 2021). The policy failed to show a link between learners' career ambitions and their choice of subjects (Raselimo & Mahao, 2015). Another unsuccessful reform, core curriculum reform was adopted to enhance education capabilities through an arrangement of the curriculum into subjects (Ministry of Education, Sports, and Culture, 1982). Both secondary and high school subjects including English, mathematics, and science were classified as core (Chere-Masopha et al., 2021) and were allocated more lessons in the school timetable. The policy classified these subjects as more important than others because they determined the learners' admission to tertiary education (Raselimo & Mahao, 2015). However, this reform and many others failed to produce self-reliant citizens who can create jobs as English and mathematics were privileged over other subjects (Chere-Masopha et al., 2021).

Later on, the government implemented Ordinary Level (O'Level) localization reform after independence in 1966, in which Cambridge Overseas School Certificate (COSC) was adopted (Letsie, 2019). Besides Lesotho, O' Level was provided in the UK and many other commonwealth countries (Letsie, 2019). Seemingly, the policy was insignificantly relevant to national educational needs (Raselimo & Mahao, 2015). All these policies permitted the orientation of curriculum and assessment towards memorization of concepts in preparation for end-of-level examinations (Raselimo & Mahao, 2015). Learning outcomes could hardly be gauged, as knowledge and skills acquired by learners over the years were only measured cumulatively, and the results from formative assessment were not used to determine learners' progress (Raselimo & Mahao, 2015).

After the Ministry of Education and Training (MOET) formulated the curriculum and assessment policy (CAP) in 2009 (Chere-Masopha et al., 2021; Selepe, 2016 ), it started to phase out COSC in 2013, and introduce the Lesotho General Certificate of Secondary Education (LGCSE) (Letsie, 2019; Selepe, 2016). The CAP (2009) focuses on the integration of curriculum with assessment and addresses concerns between educational policy aims and curriculum and assessment

framework (MOET, 2009). Among other concerns, MOET (2009) further posits that the broad policy aims required inclusive, eloquent, and well-planned specifications in the provision of global educational practices. To resolve those issues, MOET (2009, p.3) made the following policy assertions in relation to curriculum and assessment:

1. Improved, consistent, commensurate, and well-coordinated educational standards bred by comprehensive curriculum and assessment mechanisms.
2. Advanced examinations and assessments that would measure abilities envisaged by curriculum standards and demonstrate necessary data to major educational practitioners.
3. Establishment of formative assessment to facilitate learning advancement and produce data that would improve learning and add value to end-of-level summative scores.
4. Realization of socio-economic development by contributing towards self-reliance and sustainability of environmental well-being in the accomplishment of educational goals.

The current education provision enables effective curriculum delivery through monitoring of consistency in teaching, learning, and assessment, and reinforces assessment which enables close monitoring of learning; thus, “assessment if correctly done, should also indicate what a learner knows and is able to do” (MOET, 2009, p.4). Similarly, there is a strong drive for teachers to utilise assessment information to decide on lesson adjustments to ensure quality teaching and learning by “...including assessment principles and strategies that should provide feedback on the learning progress. The feedback should be used to formulate strategies that will improve the teaching and learning processes” (MOET, 2009, p.11).

Besides informative feedback, the policy eliminates dependence on summative examinations and gives rise to authentic assessment practices which link assessment tasks to everyday life situations. The policy further stipulates that assessment can also be used to evaluate curriculum aims at the end of Grade 11, to measure how learners have attained curriculum goals and for matriculation of learners to tertiary education (MOET, 2009).

Literature search on the application of formative assessment in curriculum delivery in Lesotho yielded two studies by Khechane (2016) and Ralebese (2018). Despite being conducted at the primary school level, both studies are relevant as they focused on teachers’ assessment practices in the implementation of the new integrated curriculum. In addition to teachers’ assessment practices, Khechane (2016) delved into teachers’ understanding of formative assessment and

assessment practices prior to and after training. The challenges encountered by teachers during the implementation of the notion were also investigated. The study used a mixed-method approach, whereby data were collected through a survey, interviews, and observations. A survey was carried out with 250 teachers. Among the survey participants, eight who received training on formative assessment were selected from four primary schools for interviews and observations.

The results revealed that the major challenge facing most teachers was a lack of understanding of formative assessment. Hence, some aspects of formative assessment were improperly utilized. For example, learners received little guidance as teachers continued to provide less instructive verbal feedback. Thus, opportunities for learners to observe progress, and discover their own weaknesses are inhibited. The study also discovered that effective implementation of formative assessment in primary schools is predominantly hindered by a lack of training and support, limited resources, large classes, increased workload, a shortage of resources, and limited time to prepare for classes and produce performance statements.

Khechane's (2016) study focused on primary school mathematics and involved teachers from one region. It focused on observation, oral exercise, written tests, assignments, workbooks, and peer and self-assessment as formative assessment strategies, leaving out other strategies such as portfolio, rubrics, field trip, project, and role-play. A qualitative study by Ralebese (2018) which used document analysis, interviews, and observations for data generation to evaluate teachers' assessment activities and teaching practices revealed that teachers' plans of work did not tally with their classroom practices. Practically, teachers mostly depended on summative assessment with infrequent use of formative assessment strategies while teachers' plans of work showed formative assessment as the only strategy used to gauge learners' understanding. The study further found that teachers isolated assessment from teaching both in class and in lesson planning.

The two studies by Khechane (2016) and Ralebese (2018) shed light on teachers' assessment practices in curriculum implementation. Both studies concluded that teachers received training on the implementation of the notion of formative assessment. However, the challenge is that both studies were conducted in one district of Maseru which shows that this phenomenon is unresearched in other rural districts of the country. Both authors concluded that, primary school teachers used assessment incompetently, which negatively affected curriculum delivery at that

level (Khechane, 2016; Ralebese, 2018). The current study explored the use of formative assessment at the secondary school level.

### 1.3 STATEMENT OF THE PROBLEM

Effective application of formative assessment remains a problem in Lesotho schools. Whilst improving learning is fundamental to formative assessment, teachers are also urged to ensure that learners succeed in summative assessments in order to be enrolled at tertiary education. This results in teachers' reluctance to shift from examination-orientated assessment practices to those that seek to improve learning (Ramokoena, 2018). Their choice of formative assessment strategies is influenced by class size, and ease of preparing and marking the given assessment tasks (Khechane, 2016).

Teachers mostly prefer assessment strategies that do not require them to provide descriptive feedback on learners' performance. Khechane (2016) indicates that strategies such as peer and self-assessments are not used formally by learners as they are not provided with scoring rubrics. Khechane further shows that performance tasks are not used when assessing learners due to the high pupil-teacher ratios which cause increase in teachers' workload because they require a lot of time. Thus, assessment remains summative as it fails to show learners' progress levels and ways of improving.

Though formative assessment has been studied from several perspectives, much remains to be learned about how Lesotho teachers apply it, particularly at the secondary school level. Locally conducted studies, Khechane (2016) and Ralebese (2018) focused on primary schools in the Maseru district. Less attention is given to secondary school teachers' application of formative assessment. Hence, this study seeks to address this gap, and explore how secondary school teachers apply formative assessment mechanisms in order to deliver curriculum effectively.

### 1.4 RESEARCH QUESTIONS

The main research question is articulated as follows:

How do teachers use formative assessment to deliver the curriculum at selected secondary schools in Leribe?

#### 1.4.1 Subsidiary questions

1. What understanding do secondary school teachers have of formative assessment?

2. How do teachers use formative assessment to facilitate teaching and learning in their schools?
3. How do assessment practices in selected schools influence curriculum delivery?
4. What are the influences on teachers' preference for certain assessment methods?

## 1.5 STUDY AIM AND OBJECTIVES

### 1.5.1 Aim

The study explores teachers' use of formative assessment to deliver curriculum at selected secondary schools in Leribe.

### 1.5.2 Objectives

The following objectives will be addressed by the current study:

1. To establish teachers' understanding of formative assessment as it applies to their facilitation of teaching and learning.
2. To describe how teachers use formative assessment in their facilitation of teaching and learning.
3. To examine how assessment practices in selected schools influence curriculum delivery.
4. To explore the reasons behind teachers' preference for certain assessment methods.

## 1.6 SIGNIFICANCE OF THE STUDY

The present study could benefit regular classroom teachers to reflect deeply on their daily assessment practices and identify challenges they come across in the application of formative assessment. That realization could assist them to make necessary lesson adjustments and engage learners in activities that improve the necessary skills that could enable them to address life challenges as stipulated in CAP (MOET, 2009). The study could also help students and parents to understand the goal of formative assessment and view it positively as a strategy used to show learners' progress from one level to another. The findings of the study could also enrich educational practitioners and policy makers with more knowledge regarding the effects brought by teachers' assessment practices on learners' performance. In particular, the Ministry of Education and Training could assess its efforts towards the implementation of curriculum and assessment policy. Finally, researchers could use the findings of the study as a reference in their research.



## 1.7 THEORETICAL FRAMEWORK

The study is underpinned by constructivism and Learning-Oriented Assessment (LOA) as they both encourage qualitative feedback and discourage the use of grades, which formative assessment calls for. Constructivism is more concerned with learning and how learners can develop cognitive structures, and manipulate new information (Sumayyah, 2016; Xyst, 2016) to encourage active learning. Assessment, therefore, remains a constructive activity through which active learning can be promoted (Bramwell-Lalor & Rainford, 2016; Gardner, 2012). Knowledge construction is the main idea behind constructivism theory, so is the goal of formative assessment.

Due to its accentuation on how knowledge is obtained (Olusegun, 2015), constructivism is inconsiderate of learning progress and how best assessment can be done to promote learning rather, it serves as the theoretical basis that reinforces Learning-Oriented Assessment (LOA) (Mwanda & Midigo, 2019). The study then uses LOA which concentrates mainly on the application of learning evidence and how it can be obtained and used to feed-back into learning and assessment to promote better learning outcomes (Jones, Saville & Salamoura, 2019). “LOA is theorized as a development and validation framework for identifying dynamic, interactive relationships between instruction, learning, and assessment” (Carrol, n. d, p.28), to promote learning by directing the focus of assessment towards learning (Carless, 2015b). The theoretical framework is discussed in detail in chapter 2.

## 1.8 A BRIEF PREVIEW OF THE METHODOLOGY

Under this section, the discussion of research methods that were used to investigate the problem are briefly presented. Research paradigm, approach, design, data collection, and analysis techniques are described as well. The detailed methodology is discussed in chapter 3.

### 1.8.1 Research Paradigm

The study adopted interpretivist paradigm as it helps researchers to explore a phenomenon as much as possible by finding out individuals’ experiences, understandings, and perceptions (Panhwar, Ansari & Shah, 2017; Thahn, 2015). This enables researchers to discover reality besides depending on statistics. An interpretivist perspective is based on the notion that no universal truth is found without direct interaction with individuals, as meaning is obtained through communication (Panhwar et al., 2017) and “socially constructed from local contexts and only makes sense within them” (Alderson, 2019, p. 55). In this sense, the interpretivist perspective

enabled me to explore teachers' application of formative assessment to daily pedagogical activities.

### 1.8.2 Research Approach

The study followed a qualitative approach because the appropriateness of a method together with what a phenomenon in question is, determines the choice of an approach (Ary, Jacobs & Sorensen, 2010). A qualitative approach enables a researcher to depict and realize realities and perceptions of those who are researched (Alase, 2017; Uğur, 2020), and to finally make conclusions based on an understanding of underlying reasons and ideas behind an event (Alase, 2017). Qualitative research enables deep exploration and understanding of life situations, adventures and viewpoints (Braun & Clarke, 2014; Sharma, 2018), using various data sources. According to Ary et al. (2010), a qualitative approach improves the researcher's understanding of the problem by concentrating on an aspect, instead of breaking it down into variables. Thus, this enables a researcher to draw conclusions on a phenomenon based on experiences (Alase, 2017).

### 1.8.3 Research Design

Based on the phenomenon under exploration, the researcher adopted a case study design as it allows deep investigation into an event (Chen et al., 2013; Fomunyam & Mnisi, 2017; Qiuxian, 2017). Cohen, Manion and Morrison (2011) state that a case study design is used for qualitative studies which need to explore all angles of an event. A case study is a study of one case, either an individual, a school, a group of people, "an organization, a community, or an event" (Fomunyam & Mnisi (2017, p. 6800). In this In Sammut-Bonnici and McGee's (2017) view, the uniqueness of a case study relies on its ability to bring to light different features of a situation under study. For effective data gathering, a case study facilitates coherent investigation of an event in its own context (Fomunyam & Mnisi, 2017). Thus, a case study design enables a researcher to identify interactive processes that happen during application of formative assessment in secondary school teaching and learning.

### 1.8.4 Participant selection

Three schools were conveniently selected and participants within the schools purposively selected to generate data for the study. Purposive selection is a non-probability technique used by researchers to choose participants where the purpose of the study is not to generalize findings to the entire population (Etikan, Musa & Alkassim, 2016). A reasonable selection of participants in Campbell et al.'s (2020) view, is one that is in line with research aims and objectives, thus

improving rigour of the study and trustworthiness of data and findings. Mosia (2017) adds that purposive selection is pertinent if it focuses on individuals whose responses would talk to the problem under investigation. A case selection was intended to reflect secondary school teachers' application of formative assessment in Lesotho.

#### 1.8.5 Data collection tools

To gather primary data, the study employed three data collection techniques: focus group discussions, observations, and document analysis. The application of multiple data collection techniques enables triangulation to improve the trustworthiness of the study (Maree, 2011). This also enabled the researcher to gain deeper insights into teachers' use of formative strategies in secondary school teaching and learning. Focus group discussions and observations were used to find out how teachers applied formative assessment in teaching and learning. Through observations, I got the chance to witness the day-to-day processes, and closely examined what occurred in the classroom setting besides depending on participants' views (Uğur, 2020).

#### 1.8.6 Data analysis

As a qualitative approach, interpretative phenomenological analysis (IPA) (Alase, 2017, Joseph, 2014; Tuffour, 2017) was adopted to deeply explore how individuals understand and attach meaning to their personal and social lives (Smith & Osborn, 2015). IPA enables researchers to understand the underlying lived experiences of participants (Alase, 2017). It highlights participants' freely expressed personal histories without any misrepresentation (Alase, 2017). Using IPA in a study enables researchers to assess participants' lived experiences and enable them to relate their personal encounters.

#### 1.8.7 Trustworthiness

Trustworthiness is ensured when research tools measure exactly what the researcher intends to find out (Khanare, 2012). A study becomes trustworthy only if transparency is established during data analysis (Mosia, 2017). Trustworthiness and transparency are crucial qualitative research components as they establish functionality and honesty of results (Cooney, 2016). Hence, the researcher ensured that findings were as trustworthy as possible, by ensuring credibility, dependability, transferability, and conformability.

#### 1.8.8 Ethical considerations

People have a right to be treated with respect. The researcher is therefore obliged to consider research ethics when dealing with all people involved in the study. The following ethical

considerations were followed: informed consent, do no harm, and confidentiality. Taber (2014) defined informed consent as “a basic democratic principle that individuals have a right to make a free choice over whether to contribute to a study or not” (p. 111). The Faculty of Education at NUL gave me a go ahead to conduct the study and I subsequently requested permission from two offices from the Ministry of Education and Training which gave permission before attaining permission from the school. Informed consent was obtained from all participants who signed informed consent forms.

### 1.9 LIMITATIONS OF THE STUDY

The study was restricted to three secondary schools in Leribe district. It is limited to how teachers apply formative assessment to deliver curriculum. As thus, results obtained by the study cannot be generalized to other schools.

### 1.10 LAYOUT OF CHAPTERS

The remaining chapters of the study are outlined as follows:

Chapter Two: Theoretical Framework and Literature Review

Chapter Three: Research methods and Methodology

Chapter Four: Results Presentation, Analysis, and Findings

Chapter Five: Discussion of Results, Conclusion, and Recommendations

### 1.11 SUMMARY

The chapter began with background under which formative assessment is defined, global significance of formative assessment discussed and application of formative assessment in Lesotho provided. Problem that gave rise to further research was stated, followed by research aim, objectives, and questions. Theories which underpinned the study were briefly described as constructivism and Learning-Oriented Assessment. The chapter further outlined a brief preview of methodology, which covers research paradigm, approach and design, participant selection, data collection tools and analysis. Finally, measures of trustworthiness and ethical considerations were discussed as well under methodology. I finally provided limitations of a study.

## CHAPTER 2: THEORETICAL FRAMEWORK AND LITERATURE REVIEW

### 2.1 INTRODUCTION

This chapter discusses two theories adopted as lenses for the study namely, constructivism and learning-oriented assessment (LOA). It provides a brief historical foundation of constructivism and dimensions of LOA and explains the benefits and weaknesses of both theories, including preferred strategies for classroom context, in line with formative assessment. A review of related literature on formative assessment as a basic characteristic to constructive teaching (Nkealah, 2019) is provided as well. To deepen understanding of formative assessment, a review includes studies from education systems globally. The significance of reviewing other contexts is to establish how formative assessment is implemented, and the extent to which its strategies are utilized.

### 2.2 THEORETICAL FRAMEWORK

The study is framed by constructivism theory and learning-oriented assessment (LOA). The two theories are congruent with formative assessment because their major goal is to produce self-regulated learners. Constructivism is the most preferred theory for the study and looks at learning development through social and cognitive lenses, which commonly focus on constructive pedagogical activities, and share a goal of promoting autonomy in learning. On the other hand, a detailed discussion on LOA is given with its seven interrelated dimensions that show a significant distribution on how assessment should solely focus on learning.

Mainly, constructivism brings forth a clear vision of what it means to allow learners to connect their own experiences with school activities to make learning possible (Reece, 2013). It assists towards the attainment of the curriculum goal of producing self-reliant learners. On the other hand, LOA focus on how best assessment should be done to improve learning, hence, it sees self-monitored activities, peer assessment, and qualitative feedback as reliable tools towards improving learning.

#### 2.2.1 Constructivism

As a theory founded within the psychology discipline, constructivism is one of the leading theoretical perspectives in education as it explains how individuals gain knowledge (Olusegun, 2015). Some scholars such as Amineh and Asl (2015) see constructivism as "...a synthesis of

multiple theories diffused into one form” (p. 9), while Aljohani (2017) believes that it is rooted in cognitive theories of Piaget and Vygotsky and embraces many aspects of those theories. Constructivism focuses on knowledge construction by individuals (Holmes, 2019). Against this backdrop, it can be argued that knowledge cannot be taught, but only learned. The question of how individuals develop knowledge is addressed by two perspectives, cognitive constructivist, and social constructivist. Constructivism advances two most important principles: knowledge construction and the learner as an active creator (Tilia, 2012). In accordance with knowledge construction, meaningful teaching should be relevant, social, and interactive (Olusegun, 2015; Tilia, 2012).

According to constructivists, learners should be active in their learning, acknowledge new information, shape it to their understanding, rather than be passive listeners, who just absorb new information passed on to them (Aljohani, 2017; Holmes, 2019). Formative assessment, therefore, enables learners to be actively involved through authentic assessment activities. Being the central body of learning, learners should be assisted by teachers as facilitators, to construct knowledge on their own initiatives (Jia, 2010; Li, 2012), and to perform self-assessments. Active learning in the form of self-, and peer assessments enables learners to account for their learning.

Rather than teach everything that leads to the main concept, in a constructive classroom, teachers allow learners to discover the main concept and then derive the detail (Aljohani, 2017). Learners then become experts when they can describe how formative assessment tasks improved their understanding. Constructivists mostly embrace ‘bottom-up’ teaching strategies over ‘top-down’ strategies (Aljohani, 2017), as the former strategies promote active learning (Li, 2012). Teaching strategies such as discovery, presentations, group work, and dialogic questioning are recognized as relevant by constructivists, including discoveries of new ideas and meaning, word strips, manipulatives and experimentation (Aljohani, 2017; Holmes, 2019).

#### *2.2.1.1 Cognitive constructivism*

Cognitive constructivism is attributed to Jean Piaget who articulates mechanisms by which knowledge is internalized by learners as active learning, schemes, assimilation, and accommodation (Aljohani, 2017; Mwanda & Midigo, 2019). Piaget strongly believed that people must adapt with new environments, hence defined assimilation as the way in which individuals assign meaning to events in terms of current cognitive structures (knowledge), and

accommodation as a process that involves individuals reshaping their current knowledge on account of new experiences (Amineh & Asl, 2015; Netti, Nusantara, Abadyo & Anwar, 2016).

Assimilation and accommodation are described by Olusegun (2015), and Mwanda and Midigo (2019) as fundamental to the construction of an individual's new knowledge. Olusegun further explains that constructivism is based on the premise that cognition is developed from "mental construction". Therefore, teachers must recognize learners' prior knowledge and allow them to fit in new information together with what they already know (prior knowledge) (Amineh & Asl, 2015; Rami et al., 2009). Learners' pre-requisite knowledge and prior experiences are mostly favoured by constructivists as they enable teachers to provide relevant guidance on activities and ways in which learners can build on their conceptions as they carry out self-evaluations (Aljohani, 2017; Mwanda & Midigo, 2019; Rami, Lorenzi & Lalor, 2009).

Through formative assessment, teachers can encourage learners to constantly assess how an activity helps them improve the knowledge they already have. By assessing themselves, and questioning their strategies, learners become experts in whatever skills they are expected to acquire (Li, 2012). Piaget strongly believes that development occurs prior to learning. Therefore, cognitive constructivism suggests that communication comes from inside out, to the social world (Olusegun, 2015).

#### *2.2.1.2 Social constructivism*

Social constructivism, group work and mediation (Aljohani, 2017) are at the heart of Vygotsky's theory. In Vygotsky's social constructivist perspective, communication comes from the social world, then internalized by an individual (Amineh & Asl, 2015). In this way, learners can easily relate the physical to the social world (Amineh & Asl, 2015; Sanaullah & Komal, 2016) as they interact with society. Amineh and Asl (2015) assert that Vygotsky's relevance to constructivism emulates from his belief in language, thought, and mediation hence he sees knowledge as mostly influenced by individuals through mediation by society. Vygotsky believes that development occurs through mediation, scaffolding, and zone of proximal development (ZPD) (Chemeli, 2019).

Through scaffolded support, it is easier for learners to set their own learning targets, for them to be able to identify their own weaknesses and improve on them (Clark, 2010). Vygotsky supports collaborative learning (Chemeli, 2019), and thus formative assessment in the shape of scaffolding.

Scaffolding provides a conducive learning environment to learners as it emphasizes provision of learning tools to support learning upon introduction of new concepts (Karim, Muhamad & Saman, 2010). As learners establish understanding, new skills and competencies evolve, then learning tools are gradually withdrawn (Karim et al., 2010). For example, some formative assessment strategies can only be used to introduce a new concept to learners for the development of their understanding.

Vygotsky also sees learning as a continuous movement from existing knowledge level to advanced level (Chemeli, 2019), as in formative assessment where learners progress from one level to another. As a result of social interaction, this movement occurs in the zone of proximal development (ZPD), which is defined by Amineh and Asl (2015) as an area situated between what learners can independently do and what they need guidance on. That learning gap can be filled through peer assessment (Spiller, 2011) as a collaborative strategy of learning. As a constructive strategy, formative assessment through self- and peer-assessments enables students to explore and gauge their progress (Wilson et al., 2014). In line with the present study, constructive teaching involves identification of learning outcomes, including proper selection of pedagogical activities and formative assessment tasks (Leach, 2014). In addition, constructivists strongly believe that meaningful assessment should focus its beliefs on the application of skills acquired from scientific learning rather than only on facts and mechanic principles (Ahmedi, 2019; Vjollca, 2019). Formative assessment is, therefore, a collaborative process in which teachers and peers help learners to use their zone of proximal development to progress to the next level (Sedigheh, Sardareh & Mohdsaad, 2012). The constant change of ideas in ZPD allows each individual learner to acquire a new understanding from peers and the teacher as well.

Vygotsky's introduction of ZPD can assist teachers to assess individual learners' development and abolish summative assessment as it focuses only on the learner's current achievement levels, rather than the individual learner's potential to improve in future (Karim et al., 2010). Through constructive strategies such as mediation, instructors monitor the learners' progress and promote individualized learning which is given priority in formative assessment. In essence, collaboration and negotiation between a teacher and learners in knowledge construction and skills acquisition are vital for the improvement of learners' progress (Karim et al., 2010). Thus, "formative



assessment sets a stage for more self-expression, creation of meaning and negotiation during communication” (Kumar, 2013. p.4).

To adopt a constructivist strategy, learners are expected to learn independently through social interactions to develop new strategies and solve problems to construct new knowledge (Quyen & Khairani, 2017). Explorations and active learning mostly enable knowledge construction (Biggs & Tang, 2011), including the interaction of learners with peers and their teachers (Sumayyah, 2016). Teachers interact with learners, mainly to assess their needs, and learners in turn assess other learners’ progress (Navaie, 2018). Teachers also guide learners with questions, and actively engage them through experiments and real-world problem solving (Wilson, Teslow & Osman-Jouchoux, 2014).

Although regarded as the best strategy for teaching and learning, constructivism does not meet all formative assessment requirements for instruction. Some scholars argue that it is more of a philosophical framework than a theory as it fails to define testable theories, and finally fails to clearly describe instruction (Liu, 2014). Liu further explains that constructive teaching and learning require more time from instructors; time to plan for reflection and to prepare for new activities. However, instructors seem to have limited time, which may highly affect constructive lessons. For instance, unplanned interactions may hinder learning as teachers may opt for repetitions and memorizations as scaffolding, both of which bear negative impacts on learning (Tzagari, 2014). Learning is only influenced by formative activities.

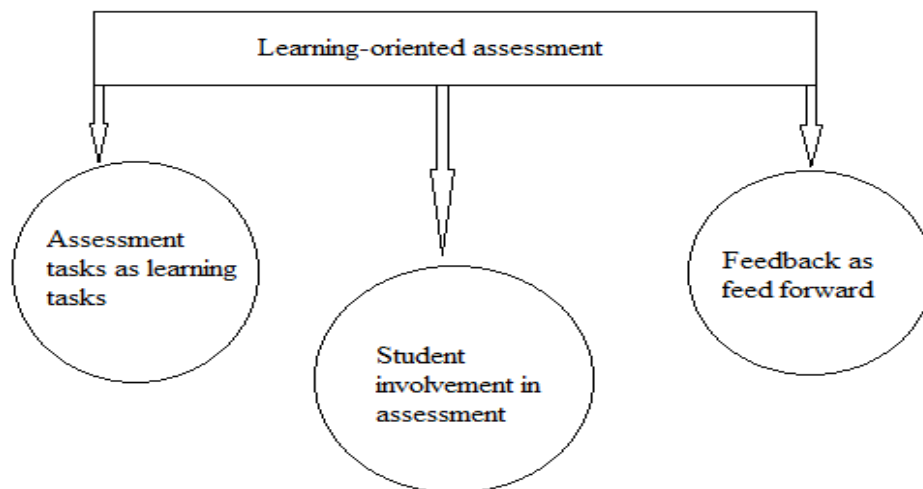
### 2.2.2 Learning-oriented assessment

Various frameworks that value and consider assessment as a fundamental facet of learning are considered to have a common goal of promoting learning (Rodriguez-Gomez, Quesada-Serra & Ibarra-Saiz, 2016). As one such framework, LOA shares some common strategies that assist learners to progress in learning with constructivism. Therefore, LOA supplements constructivism with its strategies. LOA is a cognitive, collaborative process and learner-centred approach aimed to improve knowledge retention (Purpura, 2016) by shifting learning from the teacher to the learner (Smith, 2014).

The framework was first established with an intension to avoid doubts and confusions about formative assessment processes and to strengthen learning aspects of assessment, hence it incorporates formative assessment into learning (Zeng, Huang, Yu & Chen, 2018). The LOA, a

framework developed by David Carless, gained recognition for the first time in Europe, Canada, USA, and Asia-Pacific region (Zeng, Huang, Yu & Chen, 2018). As the act “learning” comes first in the phrasing of the model, more emphasis is put on it than assessment, just the way the term is literally construed.

LOA operates under three principles, namely assessment tasks, active student participation, and feedback as feed-forward (Carless, 2007; Carless 2015a; Leong, Ismail, Costa & Tan, 2018; Pinar, 2017). When assessment tasks are based on required learning standards, students have better chances of gaining deep understanding. “LOA is at its core learner-centric, where more attention falls concentrically, beginning with the learner, followed by learner interactions with other agents in the learning process, then moving to factors outside of learners within the learning space” (Smith, 2014, p. 41). Primarily, LOA concentrates on the ability to create useful student learning strategies (Carless, 2015a), and undermines teachers’ practice of using assessment to solely verify student learning and determine the extent to which the curriculum objectives have been achieved (Doghan & Akkoyuniu, 2014). It ensures that assessment is done for both certification and learning development (Carless, 2007).

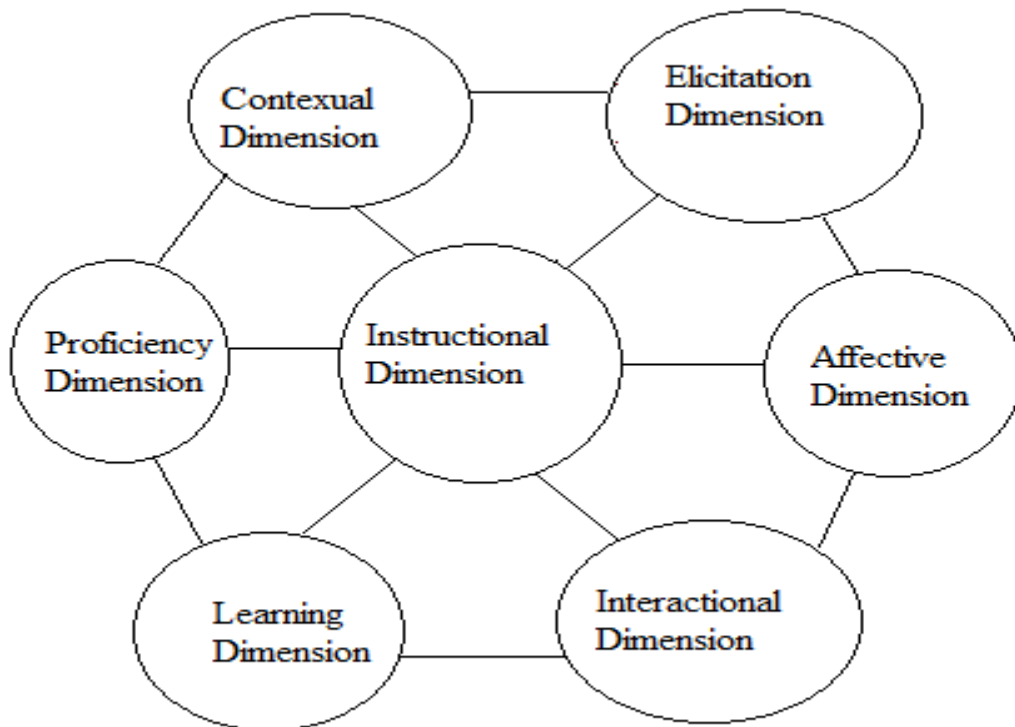


**Figure 2.1: Principles of LOA**

The first strand, assessment as learning tasks holds that learning outcomes should be incorporated into assessment tasks (Carless, 2007). This is described as constructive alignment by Carless (2007) as it enables students to be deeply involved in their learning through tasks that reflect real-world experiences. Group work and project-based learning are examples of collaborative learning to solve authentic real-world tasks. Involving learners deeply in learning promotes autonomy which leads to self-reliance. Carless (2007) further explains that unlike tasks based on memorization of concepts that learners can easily forget, learning tasks should be as authentic as possible so that learners can easily apply them in the real world. Tasks should, therefore, be aligned with the curriculum.

The second strand which advocates student involvement in assessment talks about how learners gain a better understanding of learning standards. Peer and self-assessment, and peer feedback are mostly favoured by this component to ensure that there is a link between assessment and learning goals (Carless, 2007). Therefore, curriculum can be easily delivered once assessment is linked to learning standards. The third strand focuses on instructive feedback, which learners can use to improve learning. Effective and timely feedback enables learners to monitor their own progress and make better evaluation of their learning (Carless, 2007). Three strands operate as a unified whole in that, once students are involved in learning, feedback can be actively utilized when learners are able to monitor their progress in relation to preset learning standards.

Besides principles, the occurrence of LOA is based on seven interrelated dimensions (Smith, 2014); “contextual, elicitation, proficiency, learning, instructional, interactional, and affective dimensions” (Stabler-Havener, 2014, p.53). In Stabler-Havener’s (2014) view, the dimensions influence teachers’ application of assessment and may directly impact learners’ assessment performance. The sub-section below, therefore, describes in detail how each dimension operates to attain learning progress as the goal of formative assessment.



**Figure 2.2: Dimensions of LOA**

### *2.2.2.1 The learning dimension*

Viewed as a combination of processes, outcomes, and learners, learning dimension recognizes learning as significant enough to be prioritized in curriculum and instructional decision-making (Beltran, 2014). Thus, assessment activities should gather data useful enough to promote effective learning through recognition of and bridging learning gaps and to make informed classroom decisions (Carless, 2015b). The learning dimension has two aspects. The first facet is the ability to identify learning in instructional and assessment contexts and account for lesson objectives, owing to how learning is believed to take place (Beltran, 2014). Classroom assessment is expected to show how their constructs are incorporated into learning so that they can be considered learning-oriented. Collaborative learning is mostly favoured as part of the spontaneous assessment in mediating and structuring learning. As a collaborative strategy, Navaie (2018) adds that most LOA classes engage learners in groups to help each other through questioning or dialogues. Questioning is a voluntary activity that enables learners to improve learning in formative assessment.

The second aspect of the learning dimension according to Morgan (2014), is feedback and the role it plays to promote learning. Provision of qualitative feedback is important in learning as it eliminates the use of grades. Students, therefore, need to be equipped with metacognitive strategies to understand feedback provided to them without dismissing their individual characteristics and perceptions of learning and their performance (Navaie, 2018). Feedback should, therefore, be accompanied by teaching and learning-oriented dialogues to improve self-regulation in learners. In Pinar's (2017) and Carless's (2015a) views, the timing and format, rather than the content of feedback play a significant role in the impact feedback has on learning advancement.

#### *2.2.2.2 The proficiency dimension*

Knowledge, skills, and abilities (KSAs) are addressed by proficiency dimension, such that assessment is focused on knowledge possessed by learners, the content they are expected to learn, and lastly, their level of improvement after being introduced to new concepts (Turner & Purpura, 2015). Besides teachers' one-way transmission of information, the proficiency dimension expects learners too to be actively involved in their learning. Learners, therefore, must be cognizant of their own proficiency gaps for them to be able to close them, and need support in the form of scaffolding, reframing questions, and exchange of peer feedback to show proficiency level in both classroom settings and formal assessments (Heil, 2014). Proficiency is conceptualized through theoretical models which try to justify the location of knowledge, skills, and abilities in the learners' minds, namely the "L2 (second or foreign language) ability-Lado's (1961) 'skills-and-elements' model, Bachman and Palmer's (1996) model of communicative language ability and Purpura's (2004) conceptualization of L2 proficiency" model (Heil, 2014, p.44).

#### *2.2.2.3 The interactional dimension*

Regarding assessment in talk, the interactional dimension closes learning gaps and focuses on learners' classroom interactions that occur to elucidations that do not involve conventional agents of LOA (Dean, 2014; Morgan, 2014). Assessment, therefore, must be authentic enough to produce actual interactions. As modes of interaction, LOA through interactional dimension favours "indirect questioning, direct questioning, recasts, and explorations" (Dean, 2014 p.50). Voluntary questions and feedback, according to Dean (2014), may negatively impact learning, and as a result, teachers need to pay attention to learners' responses when framing questions as they provide a clear picture of the kind of feedback and questions used to guide learning.

Immediate feedback and dialogue play a significant role through the incorporation of specific contextual values, conventional learning goals, targeted questioning, critical thinking, argumentation, and an ongoing relationship between students and teachers (Leung, 2014). Hence, effective classroom learning can be promoted through continuous dialogue, mainly in teacher-pupil interactions and peer feedback. The interactional dimension also focuses on the quality and extent of mediator intervention within a framework of Dynamic Assessment (DA) and Vygotsky's sociocultural theory. DA bridges Vygotsky's Zone of Proximal Development (ZPD), a gap between what learners can achieve through mediation and what they can achieve independently (Dean, 2014). However, as learners progress towards self-regulation, mediator intervention should decrease, and interaction should extend beyond face-to-face, mainly to technological platforms. As such, LOA is applicable to formative assessment. The interactional dimension, therefore, contributes significantly to LOA despite its occurrence in various forms which rely on assessment contexts (Dean, 2014). For instance, in a regular classroom, a teacher can frame interactions based on questions to be asked and ways in which feedback or scaffolding needs to be applied.

#### *2.2.2.4 The contextual dimension*

The context created by learners to improve learning and learning outcomes valued by the social world is accounted for by contextual dimension of LOA (Morgan, 2014). It mainly focuses on three aspects according to Smith (2014); the first aspect involves individuals whom the learner interacts with, mainly peers and the teacher. Therefore, contextual dimension values student-to-student and student-teacher interactions. The second aspect is how learners react towards learning materials such as textbooks, games, and technology used in and outside of the classroom. The third and largest aspect of contextual dimension is formed by variables such as the culture of communities where learners live, age, education being pursued, high stakes examinations, and the load needed for study. All these aspects can extend outside the classroom if more concentration is placed on best practices that improve learning and can work towards providing learners with resources to facilitate learner autonomy (Smith, 2014).

#### *2.2.2.5 The affective dimension*

The affective dimension looks at ways in which learning, teaching and test administration are guided by affect (Liu, 2014). In Stabler-Havener's (2014) view, the affective dimension specifically looks at "learners' emotions, motivation, attitudes, and beliefs about learning and

personality traits such as introversion and extroversion” (p.53). The significance of this dimension lies within the learners’ learning and assessment. As opposed to scoring learners’ work, a teacher gradually addresses individual learners’ weaknesses until they reach the required progress level. Stabler-Havener suggests that more research is required on the affective dimension of LOA.

#### *2.2.2.6 The elicitation dimension*

The elicitation dimension looks specifically at the role played by planned elicitation tasks such as textbook exercises, topic tests, and unplanned elicitation tasks including spontaneous teacher-student interactions that occur in the classroom, and what impact these elicitation activities may have on learning advancement in the long run (Liu, 2014). Morgan (2014) asserts that the elicitation dimension involves clarification strategies, error correction, and learner-learner interactions. Morgan further views the elicitation dimension as important due to its ability to ensure that the relationship between assessment, teaching, and learning enables learners to show progress. The elicitation dimension, therefore, looks at the provision of scaffolding to explore and probe for best performance.

It is perhaps reasonable to uphold LOA as a reliable framework to underpin formative assessment as it incorporates learning activities, self-and peer assessment together with constructive feedback to improve learning (Rawlasyk, 2016). It is worth examining whether teachers’ application of formative assessment incorporates all necessary credentials as per the framework, to produce self-regulated learners as per the goal of CAP (2009). In line with formative assessment, the framework matches the study as it encourages the use of positive and negative feedback to improve learning in contrast with pencil and paper assessment (Carless, 2015a). The framework also accentuates the identification of learning in instructional and assessment contexts. It does not undermine other approaches to learning, as it maximizes learning through proper use of assessment for instructional changes in alignment with curriculum standards.

Formative assessment which the study seeks to explain takes different strategies as described by the two theories. By virtue of its ability to engage learners, formative assessment requires a basic understanding of both constructivism and LOA as active processes by which learners are expected to discover principles, concepts, and facts by themselves.

Teachers must, therefore, engage learners and eliminate the use of summative activities such as rote learning (Reece, 2013), and adapt the facilitator’s role of supporting learners from the back,

creating an environment that enables learners to meet their goals through continuous dialogue. Self-regulation as advocated by both constructivism and LOA is all that education systems wish to address through the introduction of formative assessment in secondary schools.

### 2.3 TEACHERS' UNDERSTANDING AND USE OF FORMATIVE ASSESSMENT

Sustainable Development Goal 4 (SDG4) aims to provide lifetime chances to every learner, to ensure that all learners are included and have equal access to the education (UNESCO, 2021). Therefore, it is important to discuss how teachers understand and apply formative assessment in their daily teaching and learning as implementers of the Curriculum and Assessment Policy and responsible for ensuring quality education. The expected competencies from teachers for easy implementation of formative assessment are elaborated, together with all issues that respond to research questions. Teaching strategies suggested by the two theories, constructivism and LOA, are discussed at length in this section as well. Strategies included are feedback, self, and peer assessments, portfolios, and rubrics. Some challenges faced by teachers in the effective adoption of formative assessment are outlined as well. The section further captures how formative assessment is practised globally, regionally, and finally in Lesotho, the country in which the study is conducted. Mainly, the discussion on formative assessment in Lesotho is based on challenges faced by the nation's education system in implementing formative assessment.

#### 2.3.1 Expected competencies from teachers for effective implementation of formative assessment

Effective application of formative assessment in Brunstrom and Fahlgren's (2019) and Spiller's (2011) opinion needs to have the following attributes: clarity of learning intentions, elicitation of evidence, interpretation of evidence, and application of evidence. Clarity of learning intentions means that learning goals must be clearly defined right at the beginning of interaction to recommend assessment requirements and to give learners a chance to set their own learning targets. This can also enable both teachers and learners to make proper self-assessments and lesson evaluations. According to Xiao and Yang (2019), "One key aspect of employing formative assessment to support self-regulated learning is providing students with opportunities to decide on their learning goals, self-evaluate performance against their goals, and make improvement" (p. 41). Success criteria for any teaching task must be communicated to learners in a language that can be clearly understood by learners (ECoL & Burdett, 2011).



ECoL and Burdett (2011) further explain that clarifying learning or assessment outcomes also enables teachers to evaluate learners based on correct standards. Xiao and Yang (2019) believe that clarity of learning intentions increases autonomy in that learners can define learning goals and construct new knowledge by themselves. Concisely, learners' knowledge of learning targets breeds the development of self-reliance skills and improvement in learning. On the other hand, elicitation of evidence has to do with teachers gathering learning information, and evidence of learners' knowledge, understanding, and behavior (Klute, Apthorp, Harlacher, Reale & Research 2017). Proof that learning has taken place is vital to formative assessment as it updates both teachers and learners on learning progress. The only evidence that relates to learners' growth should be extracted (Ruiz-Primo, 2011). Evidence can be generated through academic dialogue, questioning, observation and analysis of student work, and peer and self-assessments (Klute et al., 2017).

With the interpretation of evidence, formative assessment enforces learners and teachers to clearly indicate when learning has taken place. Effective interpretation of evidence requires both teachers and learners to draw more attention to identifying criteria that led to learners' improvement, and criteria not yet met by learners (Klute, et al., 2017). Achievement criteria enable teachers to modify teaching and learning strategies, and to find the ones which are suitable for specified learning intentions while acting on evidence simply implies that teaching and learning can be adjusted depending on the kind of feedback received (Klute, et al., 2017). Schneider and Andrade (2013) posit that learning evidence should be closely examined to come up with information that can be used to adjust instruction for the benefit of learners. Failure of teachers to apply learning evidence to move learners forward and adjust teaching hinders the implementation of formative assessment.

Heritage (2010), on the other hand, maintains that any assessment is considered formative if it can identify learning gaps, provide feedback, involve students, and show learning progression. A learning gap between the actual level of performance and desired level must be defined to focus assessment on areas which need more attention. MacFatzien (2015) considers a process of unpacking learners' prior knowledge and identifying learning requirements as scaffolding.

MacFatzien (2015) also posits that it is essential in teaching and learning to find out learners' level of knowledge and where they are expected to be, to devise ways of ensuring that their

learning target is successfully met. This is only possible if teachers clearly understand formative assessment practices such as feedback, as it familiarizes students with what they do and how they do it to achieve learning targets (Cross & O'Loughlin, 2013). Once learners are well informed of their learning progress, it becomes even easier for them to identify the next learning step (Education Review Office, 2012).

Learner involvement is the most vital and often overlooked part of assessment process (Coombe, Davidson, O'Sullivan & Stoyhoff, 2012). For this reason, teachers need to actively engage learners in the teaching and learning process as highlighted by constructivists that, active involvement of learners makes them responsible for their own learning (Tillema, 2014). They can observe their progress in learning and identify weaknesses (Zarei, 2015), unlike when a teacher facilitates the whole process without their involvement. Students' involvement in teaching and learning facilitates information gathering process (Coombe et al., 2012). It makes work even easier for teachers when learners come up with solutions after a thorough identification of what went wrong and what needs to be done to improve performance in future. Learners can be involved either through self-assessment or peer-assessment (Coombe et al., 2012).

It is also important to measure learning progress in relation to preset learning targets. In support, Neumann, Viering, Boone, and Fischer (2013) state that it is vital for teachers to know how learners advance. When learning growth is known, teachers can easily measure learners' understanding level of concepts, and assist them to achieve advanced understanding level. Berland and McNeill (2010) add that learning progression is important as it entails three dimensions, namely teaching context, argumentative product, and argumentative process in which learners are allowed to argue and justify their responses to identify their understanding level and learning growth with ease. Students may also be engaged on arguments in new content areas to facilitate their progress (Berland & McNeill, 2010) and to justify their product of learning being skills and competences acquired.

### **2.3.2 Teachers' utilization of formative assessment strategies to facilitate teaching and learning**

For assessment to be effective, it must address learners' needs (Goodman, 2012), and see to it that expectations are clearly outlined, work is reasonably assigned and chances in which learners can self-supervise, explore, obtain, and apply feedback are provided (Lavy & Yadin, 2010). Vjollca (2019), on the other hand, presumes that formative assessment strategies do not allow

speedy monitoring of learners' progress, but require a teacher who gradually changes learning objectives from less to more complex. In addition, formative assessment strategies significantly facilitate collaboration in classrooms where teachers accidentally collect information on student learning. Integrating formative assessment strategies is thus believed to escalate learners' involvement in learning (Almuntasheri, 2016).

There are several strategies used in teaching and learning (El-Sayed, Elmashad & Ibrahim, 2017), which enable teachers to assess learners as a lesson progresses. Teachers then incorporate different tools and methods with learning tasks to attain learning tasks (Hung et al., 2018). However, the choice of an effective strategy requires a teacher who understands formative assessment requirements for better planning. A well-planned assessment strategy engages learners with activities and enhances learning (Craft & Ainscough, 2015). Formative strategies such as questioning, ungraded feedback, self and peer assessments, and formative use of summative assessment enhance learning (Chemeli, 2019), together with portfolios and rubrics.

### **2.3.3 Feedback as a strong pillar of formative assessment**

Providing feedback to learners is a constructive strategy which provides learners with assistance to progress from one level to another through others' guidance. Feedback is defined as a basic conceptual structure designed to support teaching and learning (McFadzein, 2015), and its significance is observed when it can provide students with necessary learning experiences that would improve the learning process (ECoL & Burdett, 2011; Mamoon-Al-Bashir, Kabir, & Rahman, 2016; Spector, et al., 2016). Therefore, feedback must be clear enough to be interpreted by every learner. Explicit and instructive feedback facilitates modification of teaching and learning materials (Tebeje & Abiyu, 2015), as it conveys a message to learners about their progress and suggests ways for better improvement. This can only be achieved when feedback is linked with success criteria (ECoL & Burdett, 2011).

Regarding promotion of learning growth, feedback is a best strategy which teachers can use to ensure learners' individual development (Ferguson, 2011), in which individualistic learning is best promoted through learners' observations, regulation and reflection on their own learning. Feedback that enables learners to move forward is essential in formative assessment (Brunstrom & Fahlgren, 2019). Feedback provides milestones to learners (McFadzein, 2015; Stewart & Houchens, 2014), and it marks the beginning of the learning journey. In addition, through

feedback, status of learners' individual work is measured, and teachers' knowledge of individual learners' weaknesses and strengths is enhanced (Chemeli, 2019; Leach, 2014).

Regardless of it being essential to teaching and learning, feedback has both advantages and disadvantages. Omorogiuwa (2015) conducted a study which focused on both benefits and challenges of feedback. The study found out that feedback benefited both teachers and students in that teachers began to best understand learners' progress. On the other hand, learners felt encouraged to learn, receive enough guidance on how to improve performance, and were more knowledgeable on the content learned. Thus, if traditional ways of providing feedback to learners could be avoided, teaching and learning could be enhanced as well.

Feedback has many challenges which are experienced by both teachers and learners. At some learning stages, feedback seems to be a very complicated matter in education (Boud & Molly, 2013; Mamoon-Al-Bashir, Kabir & Rahman, 2016). To learners, the way of providing feedback is sometimes unfair as they fear being publicly criticized, and often find it challenging to interpret feedback (Omorogiuwa, 2015), while at some stages they find it elusive to put feedback into practice (Price, Handley & Millar, 2011), more especially when it is not explicit enough for them to interpret it.

Against the limitations associated with assessment, Hatziapostolou and Paraskakis (2020) discourage students from engaging in feedback process due to a lack of motivation and challenges associated with connecting to and reflecting on feedback comments. Wu and Schunn (2020) add that too much critical feedback may overwhelm learners. As a result, learners are likely to ignore negative comments (Ryan & Henderson, 2017) instead of considering them as guidelines that help them to improve. Teachers should, therefore, provide few critical comments that would enable learners to make changes on their learning.

Information included in feedback influences most learners' actions (Gielen, Peeters, Dochy, Onghena & Struyven, 2010). Therefore, provision of feedback needs teachers who are constructive enough and sensible of the impact that might be brought by comments, marks and grades on learners' confidence and enthusiasm about learning (ECoL & Burdett, 2011). In that way, formative assessment would be more child-friendly if teachers would avoid negative marking or crosses and negative comments (ECoL & Burdett, 2011). In addition, McFatzein

(2015) points out that feedback should be flexible enough to be discussed, agreed upon, and implemented.

Naturally, feedback is very objective in scoring, and as such, teachers find it to be more time-consuming (Omorogiuwa, 2012), especially when it must be provided to individual learners. A study by Vogt, Tsagari, Csepes, Green and Sifakis (2020) found that feedback provided by teachers was restricted to marks and brief comments. On the contrary, Fomunyam and Mnisi (2017) emphasize that feedback should be used to collect information on individual learners in their own settings. By so doing, teachers would gain knowledge of what has been acquired by learners, and re-shape teaching such that learning goals can be successfully attained. Hence, teachers must ensure that learners obtain timely feedback that is explicit enough to motivate learners, as the learners' motivation to learn is mostly affected by untimely feedback (Goodman, 2012). Alboulsoud (2011), Bennett (2011) and Black (2015) also observed that timely and specific feedback greatly influences a learning improvement.

With regard to learning progress, William (2011) maintains that progress can be improved when feedback functions formatively. Formative assessment provides feedback in a manner that efficiently guides teaching and learning through provision of assessment information (Yin & Buck, 2019). In addition, Zhao (2010) suggests that both the learners' understanding and use of feedback be treated as equally significant factors that determine learning progress. Klute et al. (2017) posit that feedback should be applied through follow-ups and provision of assessment activities which address a learning task that seemed to be partially achieved by learners. Feedback also plays a crucial role in performance of tasks (Wu & Schunn, 2020). Therefore, teachers should adjust their traditional ways of providing feedback, and focus feedback on learners' needs.

Feedback needs to be a two-way conversation (Mamoon-Al-Bashir et al., 2016). Effective and efficient feedback is precise, informative, established by learners-both individual and peers, well timed, addresses the needs of learners, lays out ways of improving (McFatzlein, 2015). Regarding ways of improving teaching and learning, feedback remains indispensable (Coe, Aloisisi, Higgins & Major, 2014) when it is able to provide information that can be used by both teachers and learners (Tebeje & Abiyu, 2015). Feedback that provides all necessary information about the learners' progress is efficient. It should provide suggestions on how to address learning needs and must pay more attention to learning areas which need modification (Ahmedi, 2019). To ensure

quality learning, learning areas must be simplified to be best internalized by learners. Tlali and Jacobs (2015) were of a similar view that, “quality learning is associated with deep learning” (p. 230). Deep learning is facilitated by learners through self-reflection.

Owing to self-reflection, Quinton and Smallbone (2010) believed that feedback is a vehicle for reflection. Reflection escalates the process of modifying teaching and learning (Carrington & MacArthur, 2012). Decisions on teachers’ change of assessment practices and learners’ change of attitudes towards learning are best reached through reflection. Nevertheless, teachers should change learning materials, activities, and strategies to those that fully engage learners (Chappuis, 2012; Education Review Office, 2012; Klute et al., 2017).

Effective feedback positively impacts teaching and learning (Lipnevich, McCallen, Miles & Smith, 2014). A study conducted by Kopittke, Wehr and Menzies (2012) shows that learners appreciate feedback from a given task and suggests that it has a potential to enable learners to single out their weaknesses. Teachers, therefore, need to ensure that feedback is clearly understood and enables learners to improve their work. Stewart and Houchens (2014) are of a similar view that a clear procedure on how formative assessment strategies should be implemented is required. Thus, effective implementation of feedback is a requirement to teachers (Winstone, Nash, Rowntree & Parker, 2017).

#### 2.3.4 Peer-feedback

Learning becomes more inspired when learners provide feedback to and receive feedback from others as indicated by McFatzlein (2015). Feedback that is provided by peers is called peer feedback (Huisman, Saab, VanDriel & Van den Broek, 2018) and it is positively perceived by learners (Sackstein, 2017). Peer feedback is, therefore, considered to be more effective (Huisman et al., 2018; Yu & Hu, 2017) for improving learning. In addition, Chuaphalakit, Inpin and Coffin (2019) reckon that peer feedback enables learners to gain autonomy which deals with testing other learners’ strength, substantiating and corroborating each other’s ideas.

Ting and Qian (2010) presume that peer feedback has been much embraced by literature in the direction of “social, cognitive, affective and methodological benefits” (p. 86). Patchan, Schunn, and Clark (2018) on the other hand postulate that peer feedback becomes more fruitful when the criteria used to judge learning and provide guidance on peer review and significance of peer feedback are provided by teachers. Provision of feedback criteria to learners can lead to good peer

feedback. Good feedback means learners have developed skills such as “critical reflection, listening to and acting on feedback, sensitively assessing, and providing feedback on the work of others” (Chuaphalakit et al., 2019, p. 106).

Price, Handley and Millar (2011) argue that through peer feedback, a learner can discover ways of improving. For instance, a learner can comprehend a problem identified in a feedback comment provided by a teacher but fail to respond to a comment which does not show how to improve. Peer-feedback, therefore, can assist in providing alternative ways that learners can use to improve (Price et al., 2011). More importantly, peer feedback can be more useful to learners when class size is large (Wu & Schunn, 2020) because teachers who teach too many students in one class often find it difficult to comment on each learner’s progress.

Ting and Qian (2010) conducted a study which focused on integration of feedback in learning and whether it could lead to improvement in learning. The results reveal that effective incorporation of peer feedback persuades self-correction among learners and instills independence in learning. Another study was conducted by Sippel and Jackson (2015) comparing teacher to peer feedback where learners were selected for teacher feedback, peer feedback and control groups. The results of this experimental study indicated that learners in the peer feedback group outperformed learners in the teachers’ feedback group and those in the control group.

Regarding the effects of peer-feedback, Anker-Hansens and Andree (2019) conducted an intervention study which focused on experimental design. The students were engaged in peer assessment in which they individually designed experiments. They were then allowed to change a plan, perform each other’s experiments, and provide peer feedback in groups. Findings indicate that the usefulness of peer feedback was observable in groups where the attributes of learners’ work were discussed. A recent study by Wu and Schunn (2020) employed logistic regression to analyze the relationship between peer feedback effects. The learners’ perceptions as potential mediators and the likelihood of students’ implementation of feedback were also studied. The results disclosed that understanding and agreement with feedback leads to proper implementation of feedback, provision of solutions leads to understanding of feedback, and that elimination of praise contributes towards agreement.

### 2.3.5 Peer and self-assessments

As teachers begin to engage learners in assessment, learners must be taught how to engage in healthy self-assessment first, and then how to engage in effective peer-assessment (Coombe et al., 2012). Peer assessment, as defined by Topping (2017), is a setting in which learners of equal status show the standard and quality of other learners' work, then learn together by providing detailed feedback in open discussions in which each learners' judgement can be argued by peers to come up with agreed outcome. Likewise, Birjandi and Siyyari (2010) consider self-assessment and peer assessment as ways in which educational assessment goal and learner-centred approach are recognized. However, much is not known about the significance of student involvement in knowledge construction, administration, and evaluation of their own achievement and in improving each other's performance (Tillema, 2014).

On the contrary, a recent study by Goral and Bailey (2019) revealed that self-assessment provides learners with exposure to learning. Learners can reflect on their own learning capabilities and incompetence, and devise the means of achieving the required progress levels (Coombe et al., 2012; Tillema, 2014; UNESCO, 2013). This shows a significant link between self-assessment and a given piece of work (Goral & Bailey, 2019). Regarding learner-centered curricula, it is reported that much focus on testing and evaluation has been directed towards self-assessment and peer assessment in the last decade (Birjandi & Hadidi, 2012). In 2010, Chen studied how self- and peer-assessments are applied and evaluated in education. Findings indicate that the implementation is affected by participants' attitude. However, the relationship between learners' participation in peer assessment and progress in the quality of assessment is positive (Kao, 2012; Li, Liu, & Zhou, 2011; Tillema, Leenknecht & Segers, 2011).

In peer and self-assessments, learners can review other learners' work and identify what their peers are capable and incapable of doing, and suggest possible remedies to their problems (Klute et al., 2017; UNESCO, 2013). Thus, peer and self-assessments provide opportunities for learners to share thoughts on how to improve their learning progress. As such, student involvement in teaching and learning raises learners' motivation to learn (Tillema, 2014). However, when quality work is defined, peer feedback is very efficient in contributing towards collaboration in education (Anker-Hansens & Andree, 2019). On the other hand, Shen, Bai and Xue (2020) investigated effects of peer assessment on learner autonomy. Although the impact on other aspects of learning autonomy was not observable, learner autonomy was enhanced, dependency level of learners on



teachers was lowered, and thus learners gained more self-assurance in learning ability. However, peer assessment is regarded as less significant in cultures that believe that learning occurs only through assistance of teachers with more knowledge they have (Khairani, 2017).

### 2.3.6 Portfolios on development of learning progress

In the past three decades, portfolio assessment seemed to have dominated teaching and learning (Lam, 2014). When a new curriculum, with content focused on acquisition of skills and knowledge emerged, portfolios enhanced that process of shifting away from traditional assessment of measuring learning through scores (Klenowski, 2011) to a conventional strategy of establishing learning progress. Portfolios are a very useful assessment tool in which learners' work is collected over time. Kubiszyn and Borich (2010) and UNESCO (2013) define a portfolio as a systematic collection of learners' accomplishments over a given period, including a journey taken to get there. Teachers are, therefore, provided with necessary information on learning advancement (Baturay & Daloglu, 2010). The process of information gathering helps teachers and learners to collaboratively "decide on portfolio purpose, content and evaluation criteria" (Kubiszyn & Borich, 2010, p. 205). In that way, learners' progress is best judged as all steps they take to meet desired performance level are shown. Collection of all pieces of work a student has been doing throughout a given period best shows student progress to reach outlined learning outcomes.

In comparison to traditional assessment, a study undertaken by Baturay and Daloglu (2010) unfolds that, portfolios sufficiently indicate development in learning, as learners who were engaged with portfolios benefited from and appreciated use of portfolios. Baturay and Daloglu (2010) continue to show that learners who were exposed to traditional assessment could insufficiently measure their improvement in learning. It would therefore be impossible for learners to gauge their improvement without looking closely at the whole learning journey. In addition, with traditional assessment, teachers tend to concentrate on standardized scores than on how and why learners' performance has changed or remained the same (Baturay & Daloglu, 2010).

Therefore, portfolios also allow teachers to fully manage learners' progress, judge, and finally provide clear progress report (Pecheone, Morris, Davo, Krauss & Steinberg, 2018). Thus, both teachers' and learners have opportunities to make better judgement on acquisition of specific

skills learned. Likewise, Pecheone et al. (2018) argue that the progress towards attainment of learning targets is recorded until learners acquire expected skills and competences.

Tran (2014) makes a point that, portfolios make learners aware of their own learning and other pupils' learning as they are involved in criteria negotiations including how to undergo self-assessment as a requirement of portfolio assessment. Hence it is significant for each student to have his own portfolio to avoid generalization. Learners' involvement in designing portfolios makes them feel responsible for their work and can design very fascinating and adjustable portfolios (Tran, 2014), despite the utterance that portfolios are faced with design limitation, together with validity and reliability limitations (Sulaiman et al., 2020). Kubiszyn and Borich (2010) utter that, students' projects, and products, and all steps leading to a final product can all be included in portfolios. It is therefore important for learners to see the journey they took in trying to reach the desired learning output. Kubiszyn and Borich (2010) further explained that, portfolios enable learners to decide on their best final work, together with unfinished work such as drafts and blue prints.

Thus, portfolios are effective formative assessment strategies which teachers can use to show learners' success journey. Learning journey can be communicated to parents so that they can also make judgement on learners' progress, under guidance of teachers (Alaçam & Olgan, (2016). However, portfolios differ by type of contents and purpose; some carry a plethora of materials, while others carry only few materials selected by learners (Kubiszyn & Borich, 2010). To find whether portfolios really improve learning as a major goal of formative assessment, a very recent study by Dayal and Cowie (2019) discloses that, when correctly designed, portfolios can highly improve learners' performance in their disciplines. Thus, teaching and learning can be improved through portfolio application.

A related study was conducted by Abdulkadir and Feral (2014) where they aimed at establishing effects brought by portfolio assessment implementation on students' attitudes and learning. Results reveal that portfolios are both a learning tool and a sign of learners' progress. As a result, students who were assessed by portfolio acquired more knowledge than students who did not prepare a portfolio, but all learners attitude remained unchanged. This finding contradicts a belief that learners' better performance in a subject leads to improved attitude towards that subject. For instance, scholars such as Cakan, Mihladiz and Gocmen-Taskin (2010) maintain that portfolios

contribute towards good learners' attitude and improved performance towards a subject. While Guido (2013) believes that, poor attitude is not brought by underperformance, lack of information, lack of problem solving-skills, and lack self-confidence. Instead, incorrect use of formulae bears a significant contribution towards students' reduced attitude in a subject.

Owing to formative strategies, Dayal and Cowie (2019) argue that portfolios have great influence over choice of teaching strategies. The choice of strategies in Youb and Sensale's (2014) opinion is based upon understanding learners' diversity. Teachers can therefore understand learners' learning styles better from collection of learners' learning evidence. Significance of recording learning evidence is observable on current learning context where there is higher teacher-pupils ratio, and every student is expected to learn (Youb & Sensale, 2014). However, high teacher-pupils ratio may result in ineffective teaching as resources may be inadequate for learners, and the best teaching strategy would be grouping. In that case, what would be recorded in each learners' portfolio is group performance, not individual progress.

In Odabasi's (2011) view, one of the benefits of portfolio assessment on learning progress is that student encouragement to study regularly increased retention and made learning more enjoyable through a combination of documented work and self-reflection. Thus, self and peer assessments become more effective through use of portfolio assessment as learners can discuss their success and shortcomings with peers and reflect on their own learning.

Generally, portfolio assessment is used to enhance learning as it enables both teachers and learners to gain and apply new knowledge and skills, and finally prepares learners for employment (Klenowski, 2011). The ability of portfolios to prepare learners for job is in line with aims of curriculum as indicated in the Lesotho CAP that, curriculum is expected to provide all necessary skills and competences for the world of work and for self-reliance to learners (Ministry of Education and Training, 2009). However, Klenowski (2011) further reported that, the development and assessment of portfolios is limited to its preparation and generalization.

### **2.3.7 Rubrics in deliverance of assessment expectations**

Application of rubrics is vital to formative assessment as it lays down assessment expectations and levels of performance expected in a piece of work learned. As defined by UNESCO (2013) rubrics are a criterion used to measure progress. Due to their ability to lay down teachers' expectations of learners, to show learners capabilities and where to improve, and pressure learners

to regulate their performance, rubrics are considered more significant (Becker, 2016) over other assessment strategies. However, teachers seem to be reluctant to apply rubrics as assessment strategies that would enable learners to improve progress in accordance with the assessment standards. According to UNESCO (2013), criteria and levels of performance are main components of rubrics. Efforts have been made to explore assessment rubrics and their reliability (McMillan, 2012). Hence, Chowdhury (2019) defines a rubric as an important assessment tool which can assist teachers to grade learners' work fairly, and in a more reliable manner.

Basically, jointly created rubrics guide feedback for learners and peers (Andrade & Heritage, 2017). Thus, it is important for teachers to inquire learners input when designing rubrics. This would allow flexibility and create more learner friendly rubrics (Schunn, Godley & DiMartino, 2016). A study conducted by Yousef, Wahid, Chatti, Schroeder & Wosnitza (2015) reveals that the flexibility of rubrics contributes towards increased accuracy, credibility, transparency, validity and reliability of peer assessment. Another study of similar findings was conducted by Panadero and Romero (2014), and further unfolds that, learners who are exposed to rubrics show progress due to exposure to self-regulation. Regardless, Panadero and Jonsson (2013) argue that rubrics are used differently to facilitate improved progress and for self-regulation. Self-regulation in the sense that learners can use rubrics to assess their own work, to adjust and upgrade their work (UNESCO, 2013). Though the use of rubrics is more interesting to learners, Woodard, Magnifico and McCarthy (2013) posit that, rubrics are very complicated to design. Hence, teachers need to know the value of assessment to perfectly design rubrics for formative assessment (Woodard et al., 2013).

## 2.4 APPLICATION OF FORMATIVE ASSESSMENT GLOBALLY

Teachers' assessment practices vary across contexts. Therefore, literature on how teachers use formative assessment was sourced globally, with the discussion narrowed down to Africa, then to the country of study, Lesotho. The section, therefore, discusses how formative assessment was implemented, strategies which were successfully applied and the major hindrances leading to ineffective adoption of formative assessment across education systems.

### 2.4.1 Application of formative assessment in Europe

The notion of formative assessment was discovered in Europe (Chen et al, 2013), but it seems to have been insufficiently adopted across the region. Some hindrances towards effective adoption

of formative assessment in some countries in the region are outlined together with initiatives taken by governments to ensure effective application of the notion.

Specifically, in the country where formative assessment evolved, the UK, the concept is ineffectively applied in schools. Teachers fail to use feedback for formative purposes due to high workload. Hence, the government initiated the notion of ‘assessing pupils’ progress through monitoring learners’ work, record keeping and frequent assessment of learners’ growth (Swan, 2015), which overwhelmed teachers with workload. Increased workload does not allow teachers to use feedback effectively, mainly to improve learning. Subsequently, more emphasis was placed on the role played by teachers, learners and peers in assessment. As a result, the following changes in instructional practices were observed; evidence regarding learners’ growth was obtained and feedback was interpreted and utilized by teachers, learners and their peers for instructional advancement (Swan, 2015).

In Kosovo, formative assessment was recently introduced by the government which has continuously pressured teachers to adopt the notion of formative assessment through the formulation of unending reforms (Vjollca, 2019). Vjollca (2019) examined the correlation between teachers’ attitudes towards formative assessment and how they implement the formative assessment. A significant correlation ( $r=0.620$ ) was observed, while t-test results displayed that teachers’ perspectives with regard to formative assessment and implementation varied. Results further disclosed that most teachers in Kosovo understand formative assessment, but only a few implemented it correctly. Finland classroom activities are mostly dominated by formative assessment, thus working towards improving teaching and learning as more attention is given to students’ general competencies (Hung et al., 2018).

#### **2.4.2 Application of formative assessment in Australia**

Australia seems to be faced with the predicament of the ineffective application of formative assessment. Hence the need to outline attempts made by the government to improve formative application of assessment in schools to address the challenges faced by teachers.

Ineffective implementation mostly hindered the adoption of formative assessment (Delen & Bellibos, 2015). In Australia assessment does not only focus on learning improvement, as learning achievement, and awarding certification are also prioritized, resulting in teachers who develop assessment in their own understanding (Hung et al., 2018). New Zealand has recently been known

for insufficiency in the application of standard-based modes of assessment for formative and accountability purposes. Teachers' explanation of formative assessment is very narrow in New Zealand and is directed towards process and application. They regard formative assessment as meant to prepare learners for external qualifications, and as an alternative of teaching to the test (Yin & Buck, 2019). Hence, a need for practical ways that can be used to interpret learners' performance from generalized assessment (Lee, McArthur & Ellis, 2019).

However, several attempts to improve formative assessment have been made (Buyukkarci, 2014). Buyukkarci (2014) report that, the application of formative assessment, gathering information on learners' performance and achievement have long been advocated for, so that learning cycles such as adjustment of instruction during a lesson can be well planned. For example, in UK, adoption of formative assessment seems to have increased in schools. For example, benefits of formative assessment became known in London, as a result, there has been a growing increase in the absorption of formative assessment (Cross & O'Loughlin, 2013).

#### 2.4.3 Application of formative assessment in Asia

Although implementing the notion is very problematic, Asia has shown much interest on formative assessment through the introduction of policies. Societal culture and institutional constraints are the major challenges experienced in Asian countries (Hong, Phan & Renshaw, 2015). Asian top-down assessment policy is mostly complemented by teachers' lack of understanding of formative assessment (Quyen & Khairani, 2017). Quyen and Khairani undertook a review of some Asian studies on how Asian schools apply formative assessment. Majority of the studies revealed that teachers ineffectively use formative assessment due to lack of understanding and examination-oriented culture. More importantly, teachers are reluctant to conduct formative assessment as it requires too much time. An increase in time for formative activities also increases teachers' workload.

East Asian countries took policy initiatives to acknowledge the significance brought by formative assessment on learning. According to Leong et al. (2018), countries such as Hong Kong, Brunei, Malaysia, the Philippines, and Singapore wish to adjust their assessment policies such that much focus is directed towards formative assessment. For instance, Hong Kong formulated systematic pedagogical practices that would promote learning. Brunei on the other hand prioritizes feedback as it improves learners understanding (Leong et al., 2018). By contrast, Low, Shahrill, Perera and

Prahmana (2018) asserts that, teachers' assessment practices in Brunei run counter to formative assessment due to lack of understanding of the notion.

Low et al. (2018) investigated how formative assessment is practiced in one of the secondary schools in Brunei Darussalam. The study employed qualitative approach in which teachers which teachers were conveniently selected. Interview and observation results revealed that teachers are aware of formative assessment, but they fail to effectively use strategies involved in it. Another study by Untong, Jemali and Baker (2020), unfolded that formative assessment is partially applied in Brunei due to teachers' lack of skills of implementing the approach. Thus, the study recommended teachers to change their mindset and upgrade their skills for effective adoption of formative assessment.

While Philippines included formative assessment among guiding principles of curriculum delivery, Malaysia and Singapore education systems reformed their policies such that maximal use of formative assessment is encouraged (Low et al., 2018). However, Malaysian education system is examination oriented, much that formative assessment is practiced only in selected schools (Abdullah, Shin & Abdurrahman, 2020). Hence Sardareh's (2016) assertion that, Malaysian teachers lack understanding of how to use feedback to improve learning. As a result, they are unaware of strategies that can help them to use feedback in the next lesson (Sardareh, 2016).

Singapore on the other hand highly values formative assessment, much that education committees recommended it to be ranked as core to instructional activities. This change of assessment policies challenged Singaporean assessment contexts, mainly because there were no educational initiatives made prior to implementation (Leong & Tan, 2014). Wong, Koek and Tan (2020) add that, tensions arose as new policies were implemented, mainly because the summative culture of examinations clashes with the new assessment culture (formative assessment). Regardless, the Singaporean government insists on the implementation of formative assessment as existing assessment approaches ineffectively assess learners' progress (Izci, Muslu, Burcks & Siegel, 2020).

Indonesia seems to be at a very low rank towards the implementation of new assessment policies (Suprpto, 2016). The common practice of assessing learners in Indonesian contexts is a summative assessment. Arififi and Sumarni (2018) explored teachers' understanding of formative

assessment at the secondary school level of education. Teachers' inadequacy in understanding formative assessment due to inadequate training appeared as the reason why classroom assessment is dominated by summative practices. Arraffii (2020) suggest that teachers need training prior to new innovations for them to shape their formative assessment practices. A contrasting study was taken by Nurhayati (2020) to find out how Indonesian secondary school classrooms practice formative assessment. Findings indicated that, as a formative strategy, peer-assessment improved active learning.

The quality of formative assessment in Pakistan classrooms is very poor. A descriptive study which was conducted by (Khan, Zaman & Saeed, 2020) engaged 115 principals and 939 teachers for interviews, analyzed class tests for 20 teachers to explore quality of assessment applied by teachers. Findings revealed that teachers do not understand the significance formative assessment bears on learning. As a result, they are the most carefree group towards application of formative strategies such as feedback. In addition, summative assessment dominates pedagogical practices in Lahore. The reason is that teachers believe both summative assessment and formative assessment equally promote learning (Saeed, Tahir & Latif, 2018). Obviously, they prefer a less demanding approach, summative assessment.

Pakistan education system on the other hand is blamed for ineffective adoption of formative assessment as it provides no implementation guidelines. The national education policy called for the balance between formative assessment and summative assessment approaches, but formative assessment is not made mandatory in curriculum, as a result, most teachers abandon its application (Hussain, Shaheen, Ahmad & Islam, 2019). However, a contrasting view arises from Zia, Sarfraz and Mufti (2019) that, government has strengthened formative assessment system at all levels of education within Pakistan.

Application of formative assessment is viewed as an opportunity through which attainment of educational aims is enhanced in Saudi Arabia. However, it is inhibited as Al-Wassia, Hamed, Al-Wassia, Alafari and JamJoom (2015) posit that, there is a need for deeper understanding of assessment strategies by teachers. They also observed that learners too need to be equipped with understanding of peer and self-assessments. On the other hand, Alsubai'ai (2021) maintains that, adoption of formative assessment is inhibited by teachers' perceptions which are influenced by teaching experience and education level.



Likewise, Turkish ministry of education has been introducing constructivist learning programmes since 2005, which gave rise to improvement in education and teaching conditions (Han & Kaya, 2014). Teachers' assessment practices seemed to be affected by the assessment culture they have been exposed to, as a result, they minimize assessment of listening and writing skills, and focus more on assessment of speaking. Turkey prioritizes use of formative assessment to an extent that it has been established as a tool in a study in which teaching and learning framework was developed (Savic, Karakak, Tang, Turkey & Naccarato, 2017). Yasar (2017) also conducted a qualitative study to find perceptions and competences of prospective teachers about formative approaches. Results unfolded that, prospective teachers have inadequate understanding of formative assessment. Low understanding was brought by inability of prospective teachers to define formative assessment approaches and their functions. Thus, Yasar (2017) concluded that, teacher-training curricula need to be upgraded such that prospective teachers receive practical training in the long-term and real learning-teaching environments to better their experiences of formative assessment.

However, formative assessment was not valued in previous Turkish curricula. A remarkable change was only observed in recent policies (Delen & Bellibos, 2015). Delen and Bellibos (2015) conducted a study in which Turkish teachers were judged with different analytical skills, formative assessment, teacher assistance and instructor-oriented instruction were evaluated. Results revealed that there is a strong connection between teacher assistance and learners' level of accomplishment. Further, Turkey produced new curriculum policy which emphasizes formative assessment. The policy was formulated to respond to a shift in a conceptual framework guiding curriculum and teaching practices (Oz, 2014). Recent research interests have shifted away from traditional to decision-maker centred assessments, and to learner-centred assessments such as diagnostic and formative assessments (Choi, Kim & Pak, 2018).

#### 2.4.5 Application of formative assessment in Africa

Quite several formative assessment strategies are being utilised in Africa. However, insufficient training is the major challenge that most African countries are faced with (Perry, 2013). Inadequate training bred many challenges which are observed at implementation stage of formative assessment. For example, in East Africa, the notion of formative assessment is affected by perceptions of both teachers and learners as Al-Wassia et al. (2015) posit that, Kenya among East African countries seems to have effectively engaged in formative assessment practices. In

support, Chemeli (2019) conducted a study that found teachers in Kenya to have efficiently utilised formative assessment strategies. As a result, their workload is eased, and learners' interests and motivation towards learning are aroused, together with critical thinking and problem-solving skills (Chemeli, 2019). Chemeli (2019) also conducted a study which indicate that, effective use of formative assessment strategies results in positive impact on learners' performance and acquisition of problem-solving skills.

Like many other countries, Malawian education system is also faced with the predicament of ineffective implementation of formative assessment. A mixed methods Study of De Lisle (2015) found out that, teachers' beliefs and practices of teaching and learning contradict formative assessment goal in Malawi. As a result, teachers fail to use assessment data. In addition, Chiziwa and Kunkwenza's (2022) study revealed that, teachers do not attach value to feedback, as a result, feedback that they provide to learners does not inform learning. Instead, teachers use learners' performance as a tool to promote learners to the next class, which is summative. Chiziwa and Kunkwenza's study also unfolded that, teachers do not use assessment results to improve teaching strategies nor address learners' weaknesses.

In South Africa, teachers were negative towards adoption of formative assessment. Negativity of South African teachers towards formative assessment resulted in their inability to implement the concept in classrooms (Kuze & Shumba, 2011). Siweya and Letsoalo's (2014) study reveal that formative assessment standards were conflicting, as a result, incompatibility was observed on learners' performance. But lately, practical implementation of formative assessment resulted in high academic performance and acquisition of lifelong skills in learners (Cassells, 2018; Nkealah, 2019). Further, learners' learning experiences and motivation to work consistently were enhanced with effective engagement with their work (Bernard, 2015). South Africa considers formative assessment to be significant to an extent that it has teamed up with many countries such as UK, Republic of Ireland, Norway, Netherlands, France, Germany and Italy to strengthen its application through development of a toolkit and investigation of technology use in formative assessment (Wright, Clark & Tiplady, 2018).

#### **2.4.6 Challenges associated with the implementation of formative assessment in Lesotho**

Most challenges experienced by Lesotho secondary school teachers result from lack of training at all levels of education. Lesotho teachers have been immersed in curriculum reforms for a long

time, and therefore needed training to understand how new CAP operates (Letsie, 2019), as they are requested to change their assessment strategies. However, Chere-Masopha et al. (2021) and Selepe (2016) note that, teachers have been inadequately trained to implement a new curriculum. As a result, adoption of formative assessment is affected. For instance, in Chere-Masopha et al.'s (2021) study which focused on understanding of how educators prepare teachers for curriculum reforms found that, institutions of higher learning fail to equip learners with necessary skills and competences regarding implementation of educational reforms because teacher educators' involvement in curriculum reforms is very limited, as a result, their knowledge to prepare teachers for reforms is limited too. Thus, formative assessment as suggested by a new reform, CAP (2009) is not effectively applied in schools as well.

It has been observed that, Lesotho teachers generally lack basic assessment skills (Phamotse, Nenty & Odili, 2011). It is therefore evident that, teachers lack skills on how to apply formative assessment in Lesotho schools. Results of a study conducted by Phamotse et al. (2011) in Qacha's nek, revealed that, the extent to which Lesotho teachers have acquired assessment skills determines the degree to which they use such skills in classrooms. Khanare (2012) and Ministry of Education and Training (2009) on the other hand observed that in Lesotho, formative assessment is mostly practiced to gauge learners' progress as it occurs and to diagnose weaknesses. Lesotho education system uses summative assessment to check knowledge and skill acquisition (Khanare, 2012). This even motivates teachers to rely on use of summative assessment as they prepare learners for examinations.

A recent study conducted by Khechane, Makara and Rambuda (2021) indicates that though Lesotho teachers' try to implement formative assessment, most challenges appear at classroom level. Khechane et al.'s (2021) study revealed those challenges as; scarcity of resources, large unmanageable classes, increased teachers' workload and reduced teaching time. These challenges are not only experienced by Lesotho teachers. Implementation of formative assessment seems to be highly affected by these factors in many countries, as a result, teachers tend to use certain assessment methods. Hence the next section discusses factors that influence teachers' use of certain assessment methods over formative assessment.

## 2.5 Factors that influence teachers' use of certain assessment methods to deliver curriculum

Adoption of formative assessment is hindered regardless of teachers' understanding of the notion and strategies involved. Teachers are mostly faced with some challenges at classroom level (Kemal, 2016). It is, therefore, crucial to identify potential factors that lead to teachers' reluctance to adopt the notion of formative assessment and prefer other assessment methods in their classroom practices. According to Quyen and Khairani (2017) more challenges which bear significant impact on application of formative assessment rise at micro-level. Factors created by teachers and learners in the form of teachers' assessment knowledge, social factors related to teacher-learner interactions, how learners respond to assessment tasks, and tools used to assess learners. The following factors: Class size and work load; teachers' experiences and academic qualifications; availability of resources; the culture of testing, teachers' beliefs and societal preferences; and teachers' empowerment appear to be prominent factors that hinder effective adoption of formative assessment.

### 2.5.1 Class size and workload

Teachers who work with large classes mostly do not prefer formative assessment due to the complexities of classroom management and time (Figa, Tarekegne & Kebede, 2020; Zi, Ziqi, Ernesto, Min, Lan & Hongling, 2021). Formative assessment requires the application of more authentic activities. Using authentic assessment for larger classes is problematic as it increases teachers' workload (Craft & Ainscough, 2015) in terms of preparation and monitoring, especially when there are too many learners in one class. Large class sizes mostly affect teachers' initiatives to implement innovations such as formative assessment. Specifically, by virtue of its ability to delve into learners' needs, formative assessment requires more time from teachers to concentrate on improving individual learners' progress (Quyen & Khairani, 2017). Many learners makes it impossible for the teacher to focus on individual learners' growth within 40 minutes, rather they may find it easier to generalize feedback comments to all learners. Additional workload and time-consuming nature are therefore the predominant factors leading to teachers' preferences of summative assessment.

### 2.5.2 Teachers' experiences and Academic qualifications

Teachers' experiences determine how they embrace the notion of formative assessment as much as academic qualifications do. Teachers who have taught for quite a long time might have come

across a certain concept while they were learners, and have instructed a concept before, and were reported to be effective users of formative strategies in their lessons (Sach, 2011). Upon their investigation of teachers' experiences on observed classroom practices, Guo, Connor, Yang, Roehrig and Morrison (2012) found out that, teachers with more teaching experience tend to spend less time to comprehend new concepts. Guo et al. also observed that learners' acquisition of skills improves as experienced teachers can change the classroom environment to a friendly situation. In contrast, teachers who have entirely used summative assessment in their teaching or experienced summative assessment as students seldom use formative assessment strategies (Sach, 2011). Similarly, teachers who have long been in the teaching service are resistant to change even after in-service training. They have an attitude and belief that, some other strategies have been working for them, and therefore pay little attention to the dynamic nature of learning.

Owing to the choice of teaching strategies, Matuk, Linn and Eylon (2015) speculate that, teachers' experiences have great influence as teachers often prefer strategies they enjoy and feel comfortable with, without considering learners needs. As thus, teachers' experiences towards application of formative assessment potentially affect learners' performance (Dunn & Mulvenon, 2009; Stiggins, 2010). Academic learning environment helps teachers to modify their past summative practices to more useful formative assessment strategies (Kemal, 2011). Therefore, academic learning environments and professional experiences of teachers differ, resulting in differences in the application of formative assessment. A relevant study was conducted by Dodeen, Abdelfattah, Shumrani and Abu Hilal (2012) to compare teachers' qualifications and practices and perceptions between schools in two countries. Findings show that, teachers' qualifications and practices positively correlate with learners' performance. Thus, teachers' qualifications have great influence on teachers' classroom practices as well as learners' growth.

In addition, Asamoah et al., (2019) suggest that teachers with varying attributes such as expertise on assessment differently justifies their varying assessment practices. In some instances, teachers' level of expertise on assessment significantly affects their formative assessment practices. Literature also suggests that teacher's understanding of formative assessment influences their classroom assessment practices (Alkharusi, et al., 2012; Koloi-Keaikitse, 2012). It can therefore be concluded that teachers' understanding of assessment significantly influences their assessment practices and application of learners' assessment information. This further means that teachers

who are knowledgeable about classroom assessments are more likely to practice formative assessments effectively because they are more likely to integrate assessment data into their instruction to improve teaching.

### 2.5.3 Availability of resources

Resources that facilitate teachers' implementation of assessment are important. But very unfortunately schools are faced with limited resources, as a result, they switch to assessment strategies that require no resources. Inadequate resources is among those factors which highly hinder effectiveness of assessment strategies used by teachers (Ayaoye, 2010). All resources that bring about effective reorganization must be provided (Rusman, Martínez-Monés, Boon, Rodríguez-Triana & Villagrà-Sobrino, 2014). For instance, the absence of instructional materials and laboratory equipment mostly hinder the application of formative assessment (Figa et al., 2020). In their study, Rusman et al., (2014) found that, resources such as ICT, infrastructure (buildings), time to obtain and implement all necessary skills are very significant to any innovation. Teaching and learning materials such as books, laboratories are also useful to learning because without them teaching and learning cannot be effective.

### 2.5.4 Teachers' beliefs and societal preferences

Teachers' beliefs and societal preferences present another challenge on application of formative assessment which bears significant impact on curriculum delivery. The two factors may promote or inhibit teachers' preferences of assessment. Pencil and paper examinations have been used to transit learners to tertiary education and to decide job opportunities (Zi et al., 2021). Hence, society values this culture of examinations, and teachers are comfortable with the norm of prioritizing grades and are therefore reluctant to change assessment practices.

However, some teachers see formative assessment as a best approach to learning but are channeled by school culture and societal beliefs as parents still consider grading as a best strategy that shows learners achievement (Leong et al., 2018). In this regard, it is evident that parents still believe that test scores influence learners' performance in summative examinations. This belief makes formative assessment more tense and rigid as it contradicts principles of formative assessment that prioritize student involvement in the learning process.

Teachers' upbringing and beliefs greatly colour their assessment practices (Leong et al., 2018). For example, teachers believe that learners have to master content by memorizing and drilling,

concentrating only on correct responses. “This belief in the traditional role of the teachers expresses itself from generation to generation, starting from a teacher's own learning experience, upheld by their families, and later carried on as student beliefs. Therefore, changing teacher beliefs is as demanding as changing student learning” (Quyên & Khairani, 2017, p. 167).

#### 2.5.5 Testing culture

A culture of examinations which education systems are engaged with adversely affects adoption of formative assessment either by teachers, learners, and school management. As a result, teachers consistently apply summative assessment (Streff, 2016; Vogt, Tsagari, Csepes, Green & Sifakis, 2020) to measure learning, despite their awareness of formative assessment (Dofferymyre, 2016, Sulaiman et al., 2020). While teaching students how to learn is the major goal of formative assessment, teachers are also urged to teach to the test to ensure better achievement in standardized examinations (Quyên & Khairani, 2017). In addition, examinations highly influence daily assessment practices in that, teachers must apply formative assessment while at the same time ensuring that learners meet examination requirements and obtain a higher level of achievement (Black, 2015; Carless, 2012; Yin & Buck, 2015 cited in Khairani, 2017).

Students, on the other hand, pay less attention to formative activities as they see no link between what they learn and how it will help them in pencil and paper examinations (Leong et al., 2018). Western countries where the formative assessment was first established experience the same problem as teachers must balance between formative assessment and examinations (Zi, et al., 2021). Regardless, there are some teachers who make formative assessment work in summative classroom culture, integrating strategies that ensure both application of formative assessment and preparation of learners for high-stake examinations (Leong et al., 2018).

#### 2.5.6 Teachers' empowerment

Before teachers can design and implement formative assessment into practice, they need to have relevant knowledge and skills. Teachers therefore can be empowered in the form of training (ECoL & Burdett, 2011) to improve understanding of formative assessment. Due to insufficient training, Dofferymyre (2016) shows that teachers still work in isolation, particularly teachers who teach the same subject. Therefore, it is necessary that training emphasizes collaboration as a powerful tool towards effective implementation of the notion of formative assessment. It is evident that together teachers identify learners who need special attention, and devise suitable

strategies for such learners' needs in a particular subject. Insufficient knowledge of formative assessment is further reported by Khairani (2017) as a possible source of teachers leaning towards summative assessment.

A qualitative case study was undertaken by Stewart and Houchens (2014) to find out the effect of workshops at one middle school. Results unfold that, teachers who participated in workshops have grown academically, as a result, they were able to use and teach others about different formative assessment methods. On the other hand, Smithberger (2018) conducted a survey to find out how high school teachers are trained on formative assessment and the impact that training brings to the classroom. It appeared that most teachers know about formative assessment, but they need more training on how it is applied. However, the study failed to provide enough evidence on how insufficient training impacts teachers' application of formative assessment. In the view of Besser and Leiss (2014), teacher training improves expertise for improved quality of teaching. Zi et al. (2021) also believes that regular training has potential to improve teachers' motivation to apply formative assessment.

The success of any education innovation lies within teachers as implementers, hence if supported, teachers can ensure effective adoption of formative assessment. In addition, Perry (2013) believes that, as African countries and international development agencies seek to improve quality of education and broaden accessibility of education, provide adequate training to teachers on how to utilize formative assessments in the classroom should be considered as means of improvement.

Brink and Bartz (2017) raise a concern that school administration must play a major role to see to it that cultural shift from summative to formative assessment is created. In addition, it is evident that teachers tend to prefer summative assessment over formative assessment due to unexpected learners' responses and other classroom complexities, societal pressure, national educational policies, and internal school policies of assessment (Zi et al., 2021). All these factors put teachers in dilemma of which assessment strategies to use.

## 2.6 Summary of the Chapter

It is evident that formative assessment is an important practice for secondary school teachers to engage with, as it has a positive impact on learners' growth if effectively applied. It is, therefore, important for teachers to ensure that all appropriate strategies that would lead to effective integration of formative assessment into teaching and learning are used. If grading could be



understated, learners could maximize their learning potentials without any fear of underscoring, and every learner could work towards improving their own progress. However, effective adoption of formative assessment cannot be attained by forcing teachers to use formative assessment strategies; it requires MOET to motivate teachers to improve their assessment practices.

## CHAPTER 3: RESEARCH METHODOLOGY AND DESIGN

### 3.1 INTRODUCTION

The study intended to find out how teachers use formative assessment in their daily pedagogical activities. It attempted to establish whether teachers understand formative assessment. In conducting this study, it was essential to understand the systematic nature of research, as knowledge is better expanded through research, adding value to the already existing knowledge. The purpose of this chapter is therefore to describe the research methodology adopted to investigate teachers' application of formative assessment in selected secondary schools in Lesotho. It begins by describing a research paradigm employed by the study, followed by explaining the approach and design adopted. It relates how schools and participants were selected for interviews and observations, and then illustrates how data were processed after being collected. That is, it explains methodological considerations such as participant selection, data collection techniques, and analysis. Next, the chapter discusses mechanisms employed to ensure the trustworthiness of the findings before explaining how ethical issues that relate to the study were handled. Possible methodological limitations and a summary of the chapter are presented at the end of the chapter.

### 3.2 RESEARCH PARADIGM

The concept research paradigm is defined differently by various scholars based on their different views of the world. Kivunja and Kuyini (2017) define it as an angle used by researchers to view the world to come up with an appropriate methodology, including data analysis strategies for their investigations. In Thanh and Thanh's (2015, p. 24) terms, research paradigm is a combination of "a belief about nature of knowledge, a methodology and criteria for validity". For Scotland (2012), a paradigm is constituted by ontology, epistemology, methodology, or axiology. Thus, a research paradigm is important as it explains a belief system followed by scholars in a specific discipline, controls what to investigate, and finally suggests how to interpret study findings (Kivunja & Kuyini, 2017).

This study adopted an interpretivist paradigm which, according to Leong, Ismail, Costa, and Tan (2018), presents meaning in the context in which it appears. Interpretivist paradigm enables the researcher to discover knowledge from individuals who interpret reality and describe how their

world operates (Alharahsheh & Pius, 2020). The researcher's interest lies in formative assessment in Lesotho secondary schools, and therefore, ensured that in whatever interpretations made, the context was kept in mind. This follows Mosia's (2017, p. 74) contention that, "truth and knowledge are relative and discovered through engagement with participants while the researchers' values are acknowledged as contributing to the facilitation of knowledge production".

In Thanh and Thanh's (2015, p. 24) view, an interpretative paradigm "allows researchers to view the world through the perceptions and experiences of the participants". In this sense, the researcher used participants' experiences to gather knowledge and interpret data on the classroom assessment practices used by Lesotho secondary school teachers after a shift from traditional assessment to formative assessment. In this way, the context of the study was kept in mind in making different interpretations were made in this study. Alderson (2019, p. 55) states that "data are not independent, with the same intact meaning in any time and place, but they are contingent. Interpretivists' major focus is on individuals' narratives set within their context". Specifically, an interpretivist paradigm was adopted in this study to answer research questions through reflections on how teachers in selected schools apply formative assessment (Thanh & Thanh, 2015). As such, Emery and Anderman (2020) stipulate that an investigation should always start with understandable epistemological, ontological, and axiological research terms.

### 3.2.1 Ontological and Epistemological assumptions

Ontology is described as the study of existence (Khanare, 2012; Scotland, 2012; Tuli, 2010). Ontological assumptions mainly concentrate on the actual existence of an event (Alharahsheh & Pius, 2020; Scotland, 2012). Kivunja and Kuyini (2017) explain that ontology assesses the researcher's ideology (belief system) about features of reality and existence. They further explain that ontology "seeks to determine the real nature or the foundational concepts which constitute themselves that we analyze to make sense of the meaning embedded in research data" (Kivunja & Kuyini, 2017, p. 27). Therefore, participants' views about the application of formative assessment in secondary schools may differ from one another.

Epistemology concentrates on the ultimate nature of knowledge and how that knowledge is demonstrated (Kivunja & Kuyini, 2017; Scotland, 2012), or what, in Cooksey and McDonald's (2011) terms, the world considers to be knowledge. In Scotland's (2012) perspective,

epistemological assumptions focus on knowledge generation, acquisition, and transmission. It concerns the nature, basis, and forms of knowledge, and how knowledge can be acquired and transmitted to other people to discover reality (Alharahsheh & Pius, 2020). Researchers can, therefore, gain a feeling of what it means to have knowledge through epistemology.

In the current study, knowledge is gained from a community of teaching professionals, as ontological and epistemological assumptions suggest that the real world depends on knowledge that individuals have in their day-to-day interactions. Both ontological and epistemological assumptions breed modes of data collection (Tuli, 2010) that enable researchers to make a clear representation of how the world operates (Khanare, 2012). Thus, reality was created through the interaction of the researcher with participants and through findings that reflect participants' lived experiences.

### 3.2.2 Methodological and Axiological assumptions

Methodological assumptions systematically communicate all processes to be taken by a researcher to gather information relating to the research problem and have direct influence over them (Alharahsheh & Pius, 2020). Those processes include participants' selection, data collection, tools employed, and data analysis. Kivunja and Kuyini (2017) further explain that assumptions made, challenges encountered and how to reduce those challenges are the primary focus of a research methodology.

This study sought to describe teachers' experiences of formative assessment through inductive methodology. As Khaldi (2017) points out, inductive researchers undergo three basic steps: "observation, identification of patterns derived from these observations, drawing generalization on the basis of these patterns" (p. 16). Through inductive process, I was able to work iteratively between data and themes as they emerged until a complete and more inclusive set of themes was constructed.

Axiology focuses on ethical considerations from the initial stage of research (planning research proposal) (Kivunja & Kuyini, 2017). All ethical issues that relate to the study are discussed at length in section 3.9. However, in Kivunja and Kuyini's (2017, p.28) observation, axiology answers seven questions listed as follows;

1. What values must be embraced by the researcher as they carry out research?

2. What measures should be considered in recognition of participants' rights?
3. What moral principles and traits must be observed?
4. Would the researcher identify cultural, intercultural and moral issues as they emerge and how would they be attended to?
5. How would the researcher secure cooperation that participants have during the study?
6. What measures should the researcher adhere to, to ensure that research is conducted in a fair, courteous and harmonious way?
7. How would all forms of risks be mitigated, such as physical, psychological, legal, social, and economic?

### 3.3 RESEARCH APPROACH

The study employed qualitative approach to address its research questions. The approach was deemed suitable to achieve the aim of the study namely, to describe and interpret teachers' use of formative assessment from their viewpoints (Moodley, 2013). In Khaldi's (2017) observation, qualitative approach concentrates solely on gathering non-numerical data, essentially participants' thoughts or feelings and visualizations of a concept or situation through the interaction of a researcher with the participants.

Additionally, a qualitative research approach can produce data that can enable interpretivists to understand contexts (Thanh & Thanh, 2015). Creswell (2014) sees a qualitative research approach as enabling researchers to understand how societies ascribe meaning to their behaviour. It provides a specific understanding of the phenomenon by allowing participants to openly explain their feelings and allows the researcher to have detailed understanding of their practices (Alharahsheh & Pius, 2020; Sulaiman, Kotamjani, Rahim & Hakim, 2020). For this study, a qualitative research approach enabled the researcher to obtain in-depth knowledge of how secondary school teachers' assessment practices influence their delivery of curricula.

### 3.4 RESEARCH DESIGN

Creswell (2014) defines a research design as an investigation strategy within a research approach such as qualitative, which clearly shows orientation and plan of action that would be taken by a researcher in conducting research. The case study design is among qualitative methods recommended by interpretivists (Thanh & Thanh, 2015). I found the case study the most suitable

design for this study. Johnson and Christensen (2014) maintain that a case study provides detailed information on one or more cases and it “depend[s] on an analytical rather than statistical approach for interpreting findings” (O’brain, 2013, p. 88). Similarly, Creswell (2014) asserts that case studies enable researchers to comprehensively analyze a case or an event. This study explored the case of teachers’ assessment practices to acquire in-depth knowledge about the implementation of the integrated curriculum in Lesotho, particularly teachers’ assessment practices and the associated.

Three secondary schools in rural parts of Leribe were taken as multiple cases to illustrate teachers’ assessment practices. Baxter and Jack (2008) posit that a study that requires more than one case requires a multiple or collective case study. Multiple or collective case study allows a researcher to simultaneously analyse differences within each setting and between settings (Crowe et al., 2011). Creswell et al. (2011), therefore, point out that, the purpose of multiple cases is to replicate findings across situations. Baxter and Jack (2008) suggest that, to make sound comparisons, cases are chosen wisely to predict similar findings across cases or to predict contrasting findings based on theory. Thus, conducting research with the three schools enabled me to interact with participants and understand how they made sense of their daily experiences of formative assessment and to make a better comparison about their perspectives before drawing conclusions.

### 3.5 PARTICIPANT SELECTION

Primarily, the selection of participants in qualitative research concentrates on the “collection of specific cases, events, or actions that can clarify or deepen researchers’ understanding of the phenomenon under study” (Ishak & Bakar, 2014, p. 29). Basically, the selection of participants in a qualitative study eliminates statistics as well. Thus, the elimination of statistics requires that researchers be creative when selecting participants (Ishak & Bakar, 2014). For this reason, the study employed non-probability techniques, mainly purposive and convenient selection of the schools and participants.

I considered proximity when selecting the schools since the three secondary schools were geographically located close to each other and to where I live. Therefore, the schools were convenient in that, they were accessible on the days and times earmarked for the study. Convenience selection of participants is described as a technique that assigns no equal chances to participants to be selected in the study: instead, individuals who meet the criteria required by a

researcher including geographical closeness, availability, and readiness of target individuals to participate at a given time (Etikan, Musa & Alkassim, 2016).

The purposive selection which is also called judgmental selection in Ishak and Bakar's (2014) terms, on the other hand, involves "selecting participants for special situations" (p. 32). Ishak and Bakar (2014) further describe situations that require purposive selection of participants as 1) selection of cases that may be informative to a study, 2) selection of members of an inaccessible, exclusive population, and 3) identification of certain categories to be extensively explored. Creswell (2014) adds that a qualitative researcher can only understand a problem and research question by considering a purposeful choice of individuals and documents that help them to understand a phenomenon in question. Elo et al. (2014) make clarify that purposive selection is best suited for qualitative studies where the researcher focuses on participants who have the best knowledge of the phenomenon under inquiry. However, purposive selection may pose some limitations to the study, as it requires detailed data about the topic. For example, if full details are not provided, trustworthiness can be judged with difficulty (Elo et al., 2014).

The schools were also selected on purpose that because they were among those that implemented formative assessment as per MOET (2009). I, therefore, believed that teachers had enough experiences of formative assessment since it was first implemented in their schools. All teachers who met selection criteria were purposively selected from the schools. The following selection criteria were used to identify participants for the study. Participants were recruited via purposive sampling in which two groups comprised teachers with more than ten years in teaching service, while another group was made up of teachers with less than ten years in the teaching service. Five groups of teachers made up six teachers each, two groups from each of the two schools, while the fifth group was from the third school which had a total of 6 teachers who were all interviewed as one group. All these groups make a total of 30 participants.

The study focused on how teachers applied formative assessment and any teacher who met the selection criterion was enrolled irrespective of being male or female. Two teachers per school were identified for observations namely, a teacher who was trained by the MOET (NCDC) and one who was trained by teachers who attended workshops.

### 3.6 DATA COLLECTION

In qualitative research, data collection involves engaging several sources of information to obtain rich data for a researcher to gain a deep understanding of the phenomenon under study (Johnson & Christensen, 2014). For effective data collection, the study employed focus group interviews, classroom observations, and document analysis. The three data collection tools were selected to gather useful data that could respond to research questions.

#### 3.6.1 Focus group interviews

As data collection instruments, interviews enable researchers to gather information about the phenomenon under inquiry from participants by asking them questions (Johnson & Christensen, 2014). Interviews were deemed suitable to highlight rarity or regularity in the application of formative assessment in secondary schools. For instance, the study used focus group interviews to enable a dialogue and discussions between the researcher and informants on their use of formative assessment in teaching and learning.

Focus group discussions were conducted to enable participants to reflect on the connection of classroom practices with knowledge and derive data from informants' observation and reflection ability (Lai, Huang & Huang, 2020). Dilshad and Latif (2013) consider focus groups to be more useful towards producing a common understanding and several perspectives of a given research topic. In addition, focus group interviews are intended to gather qualitative data from a group of people with certain characteristics in a warm environment through discussions (Cheng, 2007). For this study, focus group interviews drew out teachers' application and understanding (Fomunyam & Mnisi, 2017) of formative assessment practices in teaching and learning. The interview questions were semi-structured and permitted me to follow up interesting responses made by informants and probe them to clarify ambiguous statements.

Basit (2010) states that interview questions should be constructed before conducting the interviews. Interviews were conducted in English, and interviewees were allowed to code switch to Sesotho where necessary and the interviews were audio-recorded with interviewees' consent. The same questions were asked to all groups as there was no need to modify them, since all the participants had the minimum educational qualifications to understand and use the English language as it is the medium of instruction at the secondary level in Lesotho. However, follow-up questions were asked in the light of participants' responses, and reactions to important areas



as they arose (Smith & Osborn, 2015). First, the discussion began with exploratory questions to encourage participants to open up and to test their understanding of the phenomenon under inquiry (Johnson & Christensen, 2014), and to guide interaction between the researcher and the participants, so as to make logical statements during data analysis and representation. Participants were expected to reflect on their lived experiences. The discussions were audiotaped to capture participants' views accurately. The focus group interviews took an average of 60 minutes each.

### 3.6.2 Observations

When carrying out observations, Creswell (2014) explains that a researcher takes field notes on all activities and interesting behaviour of participants. Observations provide clear signs of behaviour and context of the phenomenon. Hence, the study employed observations to complement other data collection instruments. Following Johnson and Christensen's (2014) assertion that, people always fail to do what they say they will do, classroom observations were conducted prior to interviews to identify formative assessment activities required by research questions two and three. This study used structured observations guided by a checklist which included, among other issues, teachers' ability to share learning intentions with learners, communicate progress indicators, encourage learners to work with peers, provide guidelines used to assess learners, encourage self-assessments and regularly intervene, and provide ways in which learners can improve their work. Conducting observations preceding interviews enabled me to produce probing questions in interviews, and facilitate effective interpretation of interview data (Xiao & Yang, 2019).

In terms of first-hand experience, I observed teachers' experiences as they occurred. Thus, only data on teachers' behaviour were recorded, rather than their intended behaviour as it is common with other techniques. To facilitate deep learning about teachers' assessment practices and the context in which they taught, I audiotaped observations, and took field notes, following observation protocol. I also allowed teachers to choose a day convenient for them to be observed. No specific topics were given to them to make a presentation on. They were simply expected to present a lesson according to their schedule.

Two teachers were observed from each school. One was trained to use formative assessment through continuous professional development (CPD) by the NCDC officials which lasted for three days once, while another teacher was trained by colleagues who attended workshops on how

to use formative assessment. Teacher 1A and Teacher 2A both worked at School A. Teacher 1A was only observed in one subject, Sesotho in Grade 11, and was a degree holder with four years' teaching experience, and she was trained to use formative assessment through continuous professional development (CPD). Teacher 2A was a PGDE holder with 12 years' experience in teaching agriculture. He did not attend any workshop on the implementation of CAP which emphasized the use of formative assessment. He learned about a new assessment (formative assessment) from colleagues who had attended workshops. School C, on the other hand, had all teachers trained through continuous professional development (CPD) on how to use formative assessment. They attended the same training as the School A teachers. Teacher 1C held PGDE with a teaching experience of eight years. She was observed when teaching agriculture in Grade 11. Teacher 2C, a mathematics and science teacher was observed teaching science in Grade 10. He held B.Sc. Ed. degree with a teaching experience of twelve years.

### 3.6.3 Document analysis

Attentive review of documents that bring understanding of phenomenon is embraced by qualitative approach (Johnson & Christensen, 2014). In Johnson and Christensen's (2014) explanation, documents are tools in which secondary data, either personal or official is obtained from. The review is termed document analysis, and is given the definition, a logical procedure used by researchers to delve into documents to discover, choose, and coherently arrange information in documents (Johnson & Christensen, 2014), to address a phenomenon under inquiry.

Following Mosia's (2017) assertion that the choice of documents should be "...strategic to answering the problem of the study" (p. 12), I used data from the learners' scripts and classwork books to analyze teachers' application of feedback. I also used teachers' preparation books to analyze how they applied formative assessment strategies such as rubrics in teaching and learning. Prior to the review of documents, I re-read CAP (2009) as it provides a backdrop against how formative assessment strategies such as feedback should be used to improve learning. This enabled me to gather relevant information from those documents.

## 3.7 DATA ANALYSIS AND INTERPRETATION

To analyze data, the study used interpretive phenomenological analysis (IPA), which according to Pietkiewicz and Smith (2014), seeks to reveal how individuals make meaning through life

experiences. To attain this, IPA is devoted to ‘giving voice’ and ‘making sense’, and draws from phenomenology, hermeneutics, and ideography to achieve the participant’s viewpoint of life experiences (Noon, 2018).

According to Noon (2018), phenomenology attempts to obtain meaning from participants’ thoughts, feelings, and memories to understand their internal world view. In essence, participants are considered the experiential experts, and IPA is considered as both descriptive and interpretive. The interpretive component is dynamic as it allows researchers to spot commonalities in participants’ experiences as they appear throughout the entire data, and create connections between those experiences with literature, and then elaborate on what is already acknowledged by other researchers about the event (Emery & Anderman, 2020). IPA requires double hermeneutics as it considers both participants’ and the inquirer’s perspectives of the world as important in that (Laan, 2015), it allows participants to understand their personal and social world, while on the other hand allowing researchers to understand how participants try to understand their own personal and social worlds. In Smith and Osborn’s (2015) terms, “...as participants try to make sense of their world, the researcher tries to make sense of participants trying to make sense of their world” (p. 53). IPA is idiographic as it focuses on deep individual analysis to understand each participant’s thoughts, beliefs, and behaviour.

IPA dominates most qualitative research methodologies across many academic disciplines (Tuffour, 2017), and is distinguished from other forms of analysis with its set of common principles (Noon, 2018) which include among others: 1) reading and note making, 2) notes to emergent themes, 3) connecting emergent themes, 4) producing a table of themes, 5) continuing to the next case, 6) final table, and 7) writing a report. Thus, IPA involves inductive and repetitive procedure, as it enables researchers to logically define all steps taken in every sequence of analysis to validate their interpretations (Emery & Anderman, 2020; Smith & Osborn, 2015). There is no basis for which reality can be discovered in Emery and Anderman’s (2020) view point, without one following IPA.

IPA was found suitable for this study as it sought to find out how teachers use formative assessment on daily pedagogical practices. Essentially, IPA gives researchers a chance to comprehensively demonstrate what they bring forward for analysis (Emery & Anderman, 2020). Emery and Anderman further maintain that researchers who use IPA have a goal of narrating

what they understand about a situation. Thus, following IPA can provide good chances to new and novice researchers to make deep explorations on participants' life experiences (Smith, Cotterill & Brown, 2020).

### 3.7.1 Data analysis process

As a foundation to understanding participants' experiences, analysis under IPA involves researchers developing a list of important statements that talk to the phenomenon under inquiry which is produced by either related sources of data or participants (Alase, 2017). The purpose of developing a list is to equivalently deal with each statement and to avoid replication and intersecting statements (Creswell, 2013). Thereafter, the statements are grouped into themes, under which participants' experiences of the phenomenon and how such experiences happened are described.

As Smith and Osborn (2015) state, analysis under IPA is a step-by-step approach in which themes are looked for, connected, and narrated in a write-up. Therefore, the first step taken to analyze data under IPA begins with researchers reading and reading, noting how participants understand the phenomenon being studied (Emery & Anderman, 2020; Smith et al., 2020). In Creswell's (2014) contention, the researcher should begin the analysis by organizing and preparing data for analysis. It is at this stage that researchers delve into semantic content and language used, and replay interview audio recording (Smith et al., 2020). A transcript is read several times and what appears interesting and significant is noted on left-hand margin. I, therefore, transcribed interviews, typed field notes, and sorted data based on informants' categories or levels (Widiastuti, Mukminatien, Prayogo & Irawati, 2020). For example, interview data were arranged according to teachers' responses.

The second step according to Emery and Anderman (2020) involves, the identification of themes and patterns as they emerge, at the same time trying to understand the phenomenon in participants' perspectives, then the development of dialogue between data and emergent themes follows. It is at this step where emergent themes are listed and connections between them noted. The analysis then continues with other cases. This step involves incorporating interviews with other participants using themes from the first interview to organize the subsequent analysis or putting aside a table of themes from the first interview and treating transcript two from scratch. Then, data transcripts were turned to participants to validate their responses (Widiastuti et al.,

2020). Member checking enhances credibility as participants were asked to confirm their responses (Smith et al., 2020). Individual data from every participant were included and accounted for under superordinate themes as to provide accurate participants' experiences (Smith et al., 2020).

Thereafter, I read organized data to ensure that it has meaning. Interviews and observations data were then coded and assigned specific categories to establish results. Coding involves a researcher categorizing data and using words to represent those categories (Creswell, 2014). However, Creswell (2014) makes it clear that a researcher should pay attention to different types of codes, such as codes on expected issues, surprising codes that were unexpected, and finally, unusual codes that may capture researchers' interests. Themes emerged as the analysis was carried out (Creswell, 2014; Laan, 2015).

Development of a framework that highlights the relationship of the themes should follow (Widiastuti et al., 2020). According to Noon (2018) and Smith et al. (2020), the researcher should be cognizant of similar themes that emerge from the initial stage of note taking, and record them in the right hand column. Noon (2018) and Smith et al. (2020) further explain that, at the later stage of analysis, themes get more advanced than initial notes, allowing theoretical connections to be made. I therefore used coding to generate description of themes as they emerged, followed by use of narrative passage and figures where necessary to present results. Themes were constructed in collaboration with participants in attainment of study goal, and to ensure that participants confirm their responses on interpretations made (Alase, 2017).

Finally, results presentation have been organized in a manner that clearly shows how interpretation originates from transcripts until the final write-up is made (Widiastuti et al., 2020). When re-reading transcripts, I took note of areas of concern from the left-hand column of each transcript whose phenomenological direction is clear and credible (Widiastuti et al., 2020). Results presentation involves direct participants' quotes and each superordinate subsection within the section of results shows quotes from more than half of the participants in the study to add richness and sincerity to analysis (Smith et al., 2020). Finally, results were interpreted. Results interpretation in qualitative studies, based on Creswell's (2014) viewpoint, can be flexible enough to be used in different types of research designs to convey meaning from participants' experiences as it is.

## 3.8 TRUSTWORTHINESS AND TRANSPARENCY

Trustworthiness can be ensured through a selection of the best data collection methods to respond to research questions (Elo, et al., 2014). Measures such as credibility, dependability, transferability, and confirmability are used to guide study trustworthiness.

### 3.8.1 Credibility

There is a need to ensure credibility in qualitative studies. Credibility is defined by Anney (2014) as certainty that can be established by a researcher on research findings. Credibility explains whether research findings reasonably represent participants' original viewpoints (Polit & Beck, 2012). In Korstjens and Moser's (2018) viewpoint, credibility deals with confidence that can be put in the truth of research findings and demonstrates whether research results are in line with information collected from participants' original data and are correctly interpreted to reflect participants' original views. Credibility can be equated to internal validity in quantitative research which focuses on true value (Korstjens & Moser, 2018). Therefore, I ensured credibility of interview data through triangulation, member checks and negative case analysis and persistent observation to establish the rigor of research findings. Triangulation is a technique that involves the application of multiple data collection techniques to counteract the weaknesses of one method (Anney, 2014). I therefore used different data sources such as interviews, observations, and document analysis. I also engaged different informants such as teachers to improve data quality from different sources.

As another strategy in which the quality of qualitative data can be enhanced, member checks were done to eliminate bias of the researcher during the analysis and interpretation of data (Anney, 2014), through inclusion of participants' voices in the analyzed and interpreted data. I, therefore, managed to resent analyzed and interpreted data back to participants for them to validate interpretations made and suggest changes if they were unhappy with interpretations made. Sometimes researchers have prior expectations of research findings, when emerging data happens to contradict researcher's prior expectations, that is called negative case analysis, and it has to be reported (Bitsch, 2005). Reporting negative cases enhances credibility as the researcher accounts for contradictions, and this could serve as a base for a feasible alternative explanation of the study. Succinctly, I reported any negative case, as this would control the temper and natural enthusiasm that I may have as a researcher.

### 3.8.2 Dependability

Dependability concerns the reliability of research results over time (Korstjens & Moser, 2018), and has to do with participants' verification of results, interpretation, and recommendations of the study to ensure that all are based on provided data (Cohen et al., 2011; Korstjens & Moser, 2018). I used a code-recode strategy to establish the dependability of research findings. With the code-recode strategy, a researcher codes the same data twice and allows a period of one to two weeks between each code (Anney, 2014). I also ensured dependability through an audit trail in which all research steps from the initial stage to development and reporting of findings are clearly described (Korstjens & Moser, 2018). Thus, it is important to show criteria and principles applied to the selection of participants, including participants' main characteristics (Elo, et al., 2014).

### 3.8.3 Transferability

Transferability is a measure of trustworthiness that is achieved when results of a study can be transferred to other settings given different informants (Anney, 2014; Bitsh, 2005; Elo, Kaariainen, Kanste, Polkki, Utriainen & Kyngas, 2014; Korstjens & Moser, 2018). I, therefore, used thick description and purposive selection to ensure transferability. Thick description in Anney (2014) explanation involves corroboration of the data collection process, study context, and final report. Anney (2014) suggests that thick description helps other researchers to replicate the study using similar conditions in other settings. I described participants' behaviour and experiences, including their contexts to create meaning to people who were not part of the study. Therefore, the study provided detailed descriptions to ensure the transferability of the study. Theoretical/purposive sampling in Anney's (2014) view, involves a selection of participants such that data to be obtained from a few informants will be maximized, without generalizing. The study, therefore, used purposive selection to obtain greater in-depth in findings.

### 3.8.4 Confirmability

Confirmability of research findings, as Pilot and Beck (2012) believe, ensures that, results accurately represent data provided by participants, and that results are not cooked up by the researcher. Korstjens and Moser (2018) affirm that confidentiality has to do with the neutrality of and objectivity the researcher. Therefore, to avoid data subjectivity I ensured that results interpretation is based on ground data and participants' viewpoints, not my own preferences. Research findings were therefore articulated to reveal respondents' experiences and opinions, not

the researcher's desires (Anney, 2014; Elo, et al., 2014). In Schreier's (2012) opinion, clear results interpretation is only produced when analysis is not done by a researcher alone. Participants' recognition of findings works as a strategy through which confirmability is ensured (Saldaña, 2011), and produces comprehensive results. Therefore, I recorded participants statements against their likely reflections, then sent back overall results to participants to verify that interpretations made are a true reflection of information they provided. Korstjens and Moser (2018) also suggest that research path be documented for transparency and for use whenever a researcher wants to check and re-check data throughout the study.

### 3.9 ETHICAL CONSIDERATIONS

Ethics are crucial in research as they guide researchers on how to conduct research without causing any harm to participants. The study took research ethics into consideration and upheld the principles of informed consent, do no harm and confidentiality.

#### 3.9.1 Informed consent

Informed consent involves participants signing informed consent forms, agreeing to terms under which the study will be carried out (Connelly, 2014; Creswell, 2014). Therefore, I disclosed the purpose of the study to all participants and allowed them to fill out consent forms. Creswell (2014) further explains that the forms include, among others, the inquirer's identification, identification of the researcher's institution, study purpose together with benefits for participating, and the level and type of participant involvement, guarantee of confidentiality to the participant, assurance that the participant can withdraw at any time, and the names of persons to contact if questions arise.

Participation was voluntary, in which the researcher obtained participants' permission to involve them in the study prior to data collection and were not forced to fill in consent forms. No pressure was put on participants to engage in the study, neither were they penalized for non-participation. I also specified the duration of the interviews, potential impact, and outcomes of a study to relevant authorities. Succinctly, participation in the study was subject to respondents' willingness to take part and to share opinions, and the consent form provided for participants to withdraw from a study at any time they wished to (Connelly, 2014). Teachers were duly informed of how information was obtained and used, together with photographing and audiotaping that took place.



### 3.9.2 Do no harm principle

The 'do no harm' principle according to British Educational Research Association (BERA) (2018) explains that a researcher should recognize and minimize the potential harm that may affect participants prior to data collection. This suggests that the researcher should not emotionally harm participants or deceive them. Accordingly, no participant was made to doubt their knowledge level and understanding. There was no attempt to humiliate or embarrass participants who found activities or questions challenging during observations and interviews. Individuals' self-efficacy, motivation, and confidence were maintained as respondents were not required to perform challenging tasks or to evaluate their performance as low.

Do no harm is one of the main principles of research ethics. Since I am aware of people's different cultural and gender differences. I respected them. Creswell (2014) suggests that it is wise for a researcher to understand the norms of indigenous cultures and respect their religion and gender differences when conducting a study.

### 3.9.3 Confidentiality

Participants have rights in research; hence, they must be informed of confidentiality (Moodley, 2013) regarding information they provide to the researcher. As such, the researcher is obliged by this principle to consider privacy of participants as important (Maree, 2011). The researcher must be considerate of information she requires participants to reveal about themselves (Kivunja & Kuyini, 2017). To adhere to this, the researcher excluded all identifying information that might reveal teachers' identities in the report writing. Participants were told that, to keep the confidentiality principle, data from the study would be used anonymously for reporting in this study and possible publication of articles from this study.

## 3.10 STUDY LIMITATIONS

The study findings cannot be generalised to Lesotho secondary school teachers' application of formative assessment to deliver curriculum because it was conducted in three secondary schools in Leribe. As Carminati (2018) suggests, the purpose of qualitative research is not to generalize findings, but to find the in-depth meaning of phenomena (Carminati, 2018). This feature enables other researchers to understand similar occurrences.

### 3.11 SUMMARY

The chapter described research methods used to generate data on how teachers applied formative assessment in their daily teaching and learning. It explained interpretive paradigm and qualitative research approach adopted for the study which concentrate on collection of non-numerical data. It explained participants' selection which were purposive and convenient as well as data collection techniques namely, focus group interviews, observations, and document analysis. Lastly, the chapter has described the method used to analyze data, methods used to ensure trustworthiness and the ethical considerations taken for the study.

## CHAPTER 4: PRESENTATION AND ANALYSIS OF STUDY FINDINGS

### 4.1 INTRODUCTION

The chapter presents findings of the study on how Lesotho secondary school teachers apply formative assessment to deliver the curriculum. Data were generated through face-to-face focus group interviews with teachers, observations of teachers executing their lesson plans as per the dictates of the curriculum and document analysis of learners' scripts, classwork books, and record books. The findings describe assessment practices applied on the delivery of curriculum, challenges experienced by teachers in the implementation of formative assessment as required by CAP (2009), and suggestions on the ways in which formative assessment can be effectively implemented. Data were organized into themes that respond to research questions: 1) teachers' understanding of formative assessment; 2) how teachers apply formative assessment to facilitate teaching and learning; 3) the influence of assessment practices on how teachers deliver curriculum; 4) what influences teachers' preferences of certain assessment methods; and 5) teacher preparedness to use formative assessment. Participants' words were quoted verbatim to permit data to speak for itself and for the readers to make their interpretation. Participants from the first school are explained as Participant 1A, 2A etc. The second school is labelled School B and the third is labelled School C.

### 4.2 TEACHERS' UNDERSTANDING OF FORMATIVE ASSESSMENT

In responding to a question on how their school policies defined the role of assessment in teaching and learning, teachers expressed a variety of views. Data also drew attention to the extent to which all teachers understand and implement those policies, teachers' understanding of formative assessment, their experiences of formative assessment and assessment methods, and the usefulness of frequently used assessment methods.

#### 4.2.1 The school policies on the role of assessment in teaching and learning

To seek teachers' understanding of formative assessment, the participants were asked to explain their schools' policies on the role of assessment in teaching and learning. Their responses highlighted several issues as follows:

Participant 1A related:

*We used to assess learners once a quarter, but this year the plan is to assess learners monthly and quarterly. But from subject to subject, we assess learners daily*

Participant 2A disclosed:

*Monthly assessment has not yet been put into practice since it is a policy that was introduced a few weeks back*

School B, on the other hand encouraged regular assessments by individual teachers as narrated by one participant:

Participant 1B echoed:

*Our school policy says that we should to assess students as much as we can by giving them tests and feedback in time to give learners enough practice.*

In trying to clarify whether they understood the policy, a follow-up question invited them to clarify this and the following responses were made:

*I understand the policy very well because I assess learners during teaching to make sure that they do well when they sit for monthly and quarterly tests (Participant 1A).*

Participant 2A stated:

*The policy is clear because we are also encouraged to assess learners after every lesson to ensure that objectives are achieved.*

Participant 1B, on the other hand, shared a similar understanding of his school policy:

*The policy is understood by all teachers very well because we try by all means to assess learners regularly.*

Participant 4C, on the other hand, shared:

*Yes, we do understand the policy very well but we do not assess learners regularly besides the verbal assessment that we do as we teach. Sometimes we only assess once a quarter.*

Participant 2B also claims:

*As long as the policy requires us to assess regularly, more often we spend a lot of time covering more content rather than assessing learners*

Participant 3B revealed:

*Although our school policy is clear that we have to assess learners as many times as we can, we focus more on teaching than assessment because learners waste a lot of time when they are given written assessment, hence we always prefer verbal assessment.*

Participant 2 from school C said:

*Yes, we do understand the policy, and we always assess learners regularly.*

While teachers claim to know about assessment policy adopted by their schools, the study found that there was no written assessment policy in schools. Teachers learned and used the national policy as a guide. Findings further indicate that, teachers' understanding of their schools' (national) policy on assessment complied with a provision of CAP which reads:

*Formative assessment...will be in terms of quarterly tests, course work, projects, portfolios and practical tests in order to develop higher order skills, attitudes and life skills. Marks of CA results will be used to monitor the performance of learners while national assessment will assess the performance of the educational system.... (MOET, 2009, p.19).*

However, the use of portfolios was not mentioned by teachers in all the three schools. With regard to terms such as "regular assessment", teachers meant a variety of practices which this study found to be unsystematic and inconsistent across the three schools.

#### **4.2.2 Teachers' understanding of formative assessment**

To establish teachers' understanding of formative assessment, I probed their understanding of policy pronouncement on assessment in their schools. To some teachers, formative assessment was a new concept altogether. While it seemed to be a difficult concept for some teachers to explain, those who thought they understood it, had different understandings. The discussion below presents teachers' understandings of formative assessment.

Participant 1A narrates:

*From the word formative, we want to know how much information learners have on the concept before it could be taught deeply. We don't have to put learners in a bracket, not*

*knowing that they know more. So, formative assessment enables us to even check their prior knowledge.*

Commenting on the same issue, Participant 6B expressed:

*Formative assessment shows a teacher whether he still delivers information well to learners because they will give feedback to show whether they understand or not.*

Participant 1B explained:

*Formative assessment helps us to see whether we have achieved our lesson objectives.*

Participant 5C clarified further:

*Formative assessment involves assessing formally and informally, assess as you teach, when you are in a classroom; we don't only assess learners through tests. We find out their strengths and weaknesses.*

Contrary to what teachers said they understood as formative assessment, the following were found to be the assessment methods they used in teaching and learning.

Participant 1C narrated:

*Since we have just started high school, formerly, we used to assess quarterly, but we are in the process of changing. We are still to discuss this because there are certain things that we need to change, especially because but we used to assess quarterly.*

Participant 1B shared:

*We use verbal assessment, grouping, and discussions to assess learners' understanding.*

Participant 4C narrated:

*The usual methods that I use in class, in some days after presenting a concept by the end of the lesson, I evaluate by writing questions on the chalkboard so that learners can write them in their exercise books, and I will be able to mark. In the other cases, I ask questions to check the learners' overall understanding of the concept, at the end of a lesson.*

Participant 6B states:

*Sometimes we give them classwork, and other times assignments.*

Participant 2A stated:

*For me, to find out that learners have prior knowledge of what I am going to teach even reduces the number of lessons that I would take to teach a concept because they know what I am going to talk about, especially on what they come across every day.*

As explained by Popham (2013), the use of formative assessment involves recording information about learning objectives that learners achieved and tasks assigned to learners are included in such a record. Hung et al. (2018), Mehmood, Hussain, Khalid and Azam (2012), Sulaiman et al. (2020), Swan (2015) and Vjollca (2019) explain the role of formative assessment in providing immediate and constructive feedback to both teachers and learners as teaching and learning takes place. What teachers said partially aligns with how formative assessment should be practiced. To teachers, any assessment that takes place during teaching and learning is formative assessment irrespective of the strategies they use. For example, provision of feedback and a record of learning information were not included in teachers' definition of formative assessment.

Due to a lack of understanding of formative assessment, teachers from School A seemed to confuse daily teaching methods with daily assessment practices. They explained the methods that they used to deliver content when they were expected to describe their experiences of using formative assessment as indicated below.

Participant 1A mentioned:

*In geography, population is a very long topic, but because that is what learners already experience every day, I ask learners questions before I introduce a topic. Then I just take them out of a class to see everything about us, and I ask them to tell me what they see. When we get back to class, I go straight to the point and ask them to explain what they have seen. As a result, we tend to move faster.*

Participants 3A and 4A seemed to assess learners through observations as learners experiment with what they have learned.

Participant 3A posited:

*In computer, I mostly rely on videos where I use a projector to show learners a concept I want to teach. Then I observe each learner do what I demonstrated.*

In the same way, Participant 4A, who taught a practical subject (agriculture) explained:

*In agriculture, we teach them mostly by demonstrating. I also use charts to ensure that learners understand. Where necessary, I take them out of class to assess them on what we were talking about in class.*

He continued:

*Since agriculture involves existing things, I refer to their everyday life experiences. I also use experiments in which learners learn by doing. Therefore, I can assess their understanding as they perform experiments. I will also see if they have not understood, and then I help them.*

In responding to the usefulness of assessment methods used, the findings reveal that, teachers have an understanding that, the appropriateness of assessment methods is determined by individual teachers' preferences. Some of the assessment methods are chosen based on two issues; 1) appropriateness for a particular subject and are not time-consuming and, 2) learners' level of understanding. However, assessment methods such as assignments according to teachers' understanding, to a certain extent, do not clearly show a teacher whether learners improve or have some weaknesses as discussed below.

Participant 3A explained:

*It depends on the kind of learners we have. Sometimes when we try to assess formatively, it takes quite a long time to teach a concept, and as a result, we end up shifting back to our usual assessment.*

Participant 6C disclosed:

*'Ache', homework does not work because learners just copy and paste from one or two learners who have done the work. It is not effective at all.*

To some teachers, formative assessment sounded like a new concept altogether, whereas those who understood it only defined it as an assessment that occurs during teaching to evaluate



attainment of lesson objectives and to measure the learners' strengths and weaknesses. Some teachers also regard formative assessment as a tool used to check learners' understanding of the concept that is being taught, while others indicate that formative assessment is used to find out learners' prior knowledge regarding a concept that is being introduced.

The study found out that teachers have limited understanding of formative assessment. This is evidenced by the assessment policies put in place in their schools that focused only on grading and accountability rather than learning progress, whereas teachers' descriptions of daily assessment practices and teaching methods indicated that they practised formative assessment to some extent. The definitions of formative assessment provided by teachers and their daily assessment practices, to some extent, resonate with Cotton's (2013) definition of formative assessment that it permits a teacher to evaluate learners' progress during instruction and to adjust teaching according to learners' needs.

However, teachers' experiences of using formative assessment show that their choice of teaching methods is influenced by MOET which include quarterly tests among formative assessment practices. This suggests that, teachers are expected to provide marks for every learner within the stipulated time. As a result, a lot of confusion is created among teachers who do not understand formative assessment, whereas those who understand the concept and its intentions over learning indicated that their main concern was not necessarily to improve learners' progress, but to improve grades for summative purposes as a requirement for their quarterly assessments in which learners are expected to show improvement. Findings reflect that teaching methods that make teachers' work easier are mostly used, as they enable quick delivery of content.

#### 4.3 TEACHERS' APPLICATION OF FORMATIVE ASSESSMENT TO FACILITATE TEACHING AND LEARNING

Results from both interviews and lesson observations complement each other in that what teachers said they did in interviews was revealed in lesson observations. Teachers' comments expressed confusion between summative and formative assessments, though they were not aware due to a lack of understanding. Teachers just practised assessment in their daily pedagogical activities without having knowledge that assessment is classified as formative and summative. Teachers' expressed confusion is caused by conflicting policy aspirations of various departments of MOET. The NCDC aspired for the use of formative assessment in a bid to ensure full realization of

learners' competencies as stipulated by the CAP. On the other hand, ECoL has maintained an examination protocol which conflicts formative assessment as prescribed by CAP.

#### **4.3.1 Findings from interviews**

In School C, teachers claimed to have used formative assessment only at Grade 8 at the beginning of the implementation of CAP. As a result, they failed to explain a step-by-step application of formative assessment undertaken in their daily teaching and learning for the reasons explained below.

Participant 4C shared:

*In the first year of implementation of the new curriculum, we tried because we were promised that Grade 8 was a common first year where we observe students and observe their talent, then when they go to Grade 9 they would be streamed into advanced and proficient groups but that didn't happen. Then we got back to our normal ways of assessing because we were aware that our learners would go nowhere with that kind of assessment.*

On the same point of step-by-step application of formative assessment, Participant 6C revealed:

*We do not practice formative assessment although the plan of the new CAP was to assess formatively. Because ECoL asks questions in an irrelevant way, so assessing formatively wastes a lot of time, and as a result, we assess in our normal way.*

She further explained:

*In the implementation stage, in Grade 8, we tried to use formative assessment. We used to assess learners' progress and abilities because we were told by NCDC that in Grade 9, learners would be streamed according to their talents, but that didn't happen. Subsequently, we got back to our normal ways of assessing learners, and we are no longer interested whether learners acquire other skills and competences. Therefore, measuring their progress through formative assessment is a waste of time.*

Due to a loss of interest in the application of formative assessment, some teachers do not know how formative assessment should be applied. They just assess learners in their own ways they deem appropriate.

Participant 4B maintained:

*We used to use the syllabi provided by NCDC for the new curriculum. However, when we realised that ECoL assessed in old ways that LGCSE used, we had to change our ways of presenting the curriculum as we realised that if we assessed according to NCDC, learners would fail LGCSE. Accordingly, we had to go back to our old assessment methods.*

Participant 1B from the same focus group added:

*Briefly, we have not implemented the new CAP at all, even a way of teaching, we only teach content that ECoL assesses, and we do not teach to ensure that learners acquire skills.*

Additionally, participant 5B stated:

*We just compare examinations syllabus with teaching syllabus, then we found out that there is no time for the skills we model through formative assessment will be assessed by the end of LGCSE, it is just a waste of time.*

Within the same focus group discussion, Participant 2B opined:

*ECoL and NCDC do not work hand in hand. ECoL has not changed a way of assessing. We have a feeling that NCDC has not informed ECoL about new CAP.*

Participant 6B narrated:

*We were told that learners' progress will be assessed based on what they are competent in but ECoL does not do that, it assesses learners in different and old ways. So, as teachers, we have no option but to assess learners the way ECoL does. Grades do matter a lot to ECoL.*

The findings show that formative assessment is ineffectively applied in secondary schools as revealed by the participants' inability to explain the step-by-step application of the process at the three schools. Teachers were so clueless that some claimed that the notion of formative assessment was new to them. Findings also reveal that, teachers rely on summative assessment because at the end, learners are expected to write the LGCSE examinations. Teachers, therefore, teach to the test and do not concentrate on assessment of progress and acquisition of skills. Their

major goal is to ensure that learners obtain better marks in LGCSE. The message that is conveyed by teachers' responses is that, they had not changed their ways of assessing learners as summative assessment aligns with the ECoL LGCSE expectations at the end of four years.

#### **4.3.2 Findings from lesson observations**

Data from the lesson observations of School A and School C teachers confirmed data from the interviews. Teachers at School B declined to be observed. The principal of the School B informed me that teachers at the school disappear even when inspectors from the Ministry of Education and Training scheduled time to inspect them. Therefore, no teacher agreed to be observed in this school. On the other hand, all teachers at School C were trained by NCDC. However, they mentioned in interviews that they did not practise formative assessment at all, and therefore teaching and learning in observed lessons was solely teacher-centred with minimum verbal assessment in which learners just replied with 'yes madam' all the time. Assessment was teacher-centred since observed teachers talked for the whole 40 minutes without learners intervening with questions.

The findings from observations which sought to find out how teachers applied formative assessment as compared to their responses from focus group discussions are presented below.

Participant 1A taught Sesotho and Geography, while Participant 2A taught agriculture. Lesson observations revealed that Participant 1A was able to share learning intentions with learners at the beginning of the lesson. Likewise, Participant 2A was able to share learning intentions with learners and communicated progress indicators. Participant 1A did not write learning intentions on the chalkboard but shared them verbally. Participant 1A elaborated more on learning intentions to ensure that every learner understood what they meant. Progress indicators were also communicated by the observed teacher. During the observation, learners were seated in groups and were able to assist each other through questioning and agreeing on responses to be given to other learners who asked questions. Verbal assessment strategies that learners were exposed to in their groups were very formative because they could quarrel when one learner provides unjustified response. They would say 'hlalosa' [translated as 'explain'].

Participant 1A also encouraged learners to work together and marked them as groups. However, the participant did not provide guidelines used to assess learners, and only asked recall questions

which did not require them to justify their responses. Learners were not given a chance to make corrections on their own; a teacher himself made corrections on the board. Participant 2C, on the other hand, encouraged group work in which learners were able to guide each other as questions were asked. However, there were no guidelines provided for learners to assess themselves or to assess their peers. The teacher provided time for learners to make corrections on their own and to correct each other where they provided wrong responses.

On the issue of progress indicators, Participant 1A was able to communicate progress indicators as she told learners that they would explain words, pick up characters as they read. During the lesson, learners were able to do so. Also, learners were able to justify their responses, and make corrections on their own. Similarly, Participant 1C linked progress indicators with prior knowledge. This practice of communicating progress indicators comply with formative assessment as suggested by Brunstrom and Fahlgren (2019) and Spiller (2011). However, Participant 2C did not communicate any progress indicators in his lesson. He just explained concepts and gave tasks to learners as the lesson progressed.

Participant 1A was also able to encourage peer assessment as she provided enough time for learners to provide different views on one point until they agreed on one correct answer. The teacher was just the facilitator. Participant 2A also encouraged learners to work (peer assessment) together and agree on responses before they wrote them down as suggested by Coombe et al. (2012). However, Participant 2A did not provide any criterion to use for assessing each other's responses as formative assessment requires. Learners only discussed answers per group and then submitted them to the teacher who marked with crosses and ticks only. Likewise, Participant 1A did not provide criteria for self- and peer-assessment as learners randomly assessed themselves. But she regularly intervened in a lesson. Similarly, Participant 2C intervened regularly as learners wrestled with the tasks until they got them correct. Exceptionally, Participant 1A asked learners to write down points and questions where they needed clarification as the lesson continued. As she explained, that would enable learners to remember what they intended to ask. The teacher was able to make comments that enabled learners to reflect on their progress and improve on their weaknesses. The teacher also encouraged learners to do a lot of reading on their own as she suggested ways in which learners could improve their progress. Similarly, the comments that

Participant 2C made enabled learners to improve on their weaknesses, and he was able to suggest ways in which learners could improve their progress.

Participant 2A, on the other hand, assigned learners to do an experiment of watering plots. He asked each learner to water one plot before the sun set, and another in the evening and observe in the morning. He then asked learners to report to the class the next day on what happened to the water on two different plots. Participant 2C also gave assignment at the end of the lesson using tasks that required learners to use their daily life experiences because agriculture was practised every day in their homes. In this case, assessment is authentic enough to enable a teacher to assess what skills learners have acquired when describing their observations.

With regard to the classwork given, Participant 2A did not make any comments on the learners' work; he just made corrections on the board and did not suggest ways in which learners could improve their work. Participant 1C used written assessment as well, but performed most of the activities herself, though the assessment tasks required learners to demonstrate knowledge and skills acquired through observation rather than practice. Just like Participant 1C, Participant 2C relied more on verbal assessment with a lot of responses coming from the teacher.

The observation results resonate well with interview responses about the application of formative assessment in teaching and learning as observation data reveal that, teachers' assessment practices had not changed since the introduction of CAP. They used verbal and short answer questions in which learners spent less time to complete a task, and a teacher spent more time providing solutions to the task. This was emerged in interviews that formative assessment wasted a lot of time, hence, teachers preferred methods that did not allow learners with more time to work on their own.

What was observed from two teachers in School C is believed to be what all teachers in that school practised because it was a small high school which was a secondary school prior to the implementation of CAP (2009). It has a total of 6 teachers who were all trained to use formative assessment through continuous professional development upon the introduction of CAP in schools. However, all observed teachers were able to share learning intentions with learners, and the attainment of learning intentions was measured through feedback.

Since feedback is a major tool that provides information about learning progress, it also enables learners to identify their strengths and weaknesses. It also enables learners to find ways of improving on their weaknesses to attain the required performance levels. Although teachers had not been provided with training on the application of formative assessment, the knowledge they had acquired through pre-service training still enabled them to improve learning to some extent. The sub-section below describes teachers' application of formative assessment to improve teaching and learning.

#### 4.4 TEACHERS' USE OF FEEDBACK AS A TEACHING AND LEARNING TOOL

This section presents findings on two issues namely, how teachers provide feedback to learners and how they used feedback to monitor the learners' progress.

##### 4.4.1 Ways of providing feedback to learners

The results from the interviews revealed that teachers used different ways to provide feedback to learners. They were at liberty to choose a method they found suitable to use for a particular subject or assessment as noted below.

Participant 5C affirmed:

*As I mark, I jot down learners' errors on a paper, and then I show them serious and minor errors in class. Afterwards, we discuss them together, for example if a mistake was in the verb agreement, one would say "she say", then I write that on a board and ask learners to correct it.*

The above quotation suggests that some teachers use feedback formatively to enable learners to improve.

Participant 3A stated:

*I use verbal comments and sometimes write comments in learners' books.*

Participant 4A also found verbal feedback as important in most of his lessons, as he explained:

*After tests, I provide verbal feedback in which I discuss questions with them, and each learner makes corrections where necessary as we discuss.*

The response of Participant 1A concurred with the observation results where she was observed in classroom assessment. As she was analysing a literary text, she used verbal assessment and feedback throughout that lesson.

Participant 2C explained how they provided feedback to learners at the school:

*We provide verbal feedback also because we discuss with learners in class.*

In addition to verbal feedback, Participant 6B noted:

*We provide verbal feedback to learners' groups*

Either through group discussions or classroom discussions, it is evident that in most lessons, all teachers use verbal feedback with a rare application of other forms of feedback such as peer feedback and self-assessment as noted in McFatzein, (2015) and Coombe et al. (2012). The results from classroom observations also confirm that teachers use verbal feedback more than any other form of feedback. In all the observed lessons, verbal feedback was given immediately after learners had provided responses. However, some teachers, especially those who taught practical subjects such as computer, agriculture, and woodwork provided feedback differently depending on the tasks given to learners.

Participant 4A posited:

*Basically, learners do things practically on computer, including assessment. I just check their work, and give them feedback on what they have done on computers.*

The above comments are refuted by observation data which reveals that teachers were able to provide immediate feedback only because they used verbal assessment. Feedback was also written on the chalkboard to permit all learners to make a good comparison to their responses, and to judge their own progress. From lesson observations, only a mathematics teacher provided written feedback in learners' classwork books together with verbal as he assessed learners in class.

After every assessment, learners must be provided with feedback to ensure that learning has occurred (Ferguson, 2011). Teachers should also ensure that feedback enables learners to improve learning by providing constructive comments that guide learners (ECoL & Burdett, 2011). Feedback can also be provided through peer assessments McFatzein, (2015). The section that follows presents the way in which teachers use feedback to monitor learners' progress.

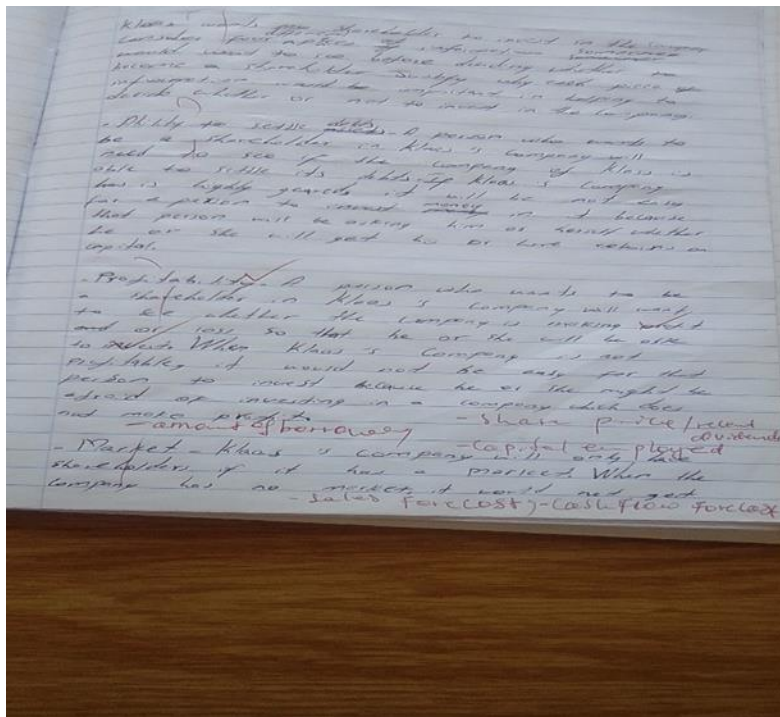


#### 4.4.2 Application of feedback to monitor learners' progress

With regard to how teachers monitored learners' progress, the results reveal that teachers mostly comment on learners' scripts and classwork books as discussed below.

##### 4.4.2.1 The findings from learners' classwork books and scripts, and interviews

The section presents discussions on how the findings from analysis of learners' scripts were used to supplement data from interviews. The section further shows where participants' views differ from what they practice. Data from analysed documents such as learners' classwork books and scripts were used to supplement participants' views on the use of feedback. Of the 24 assessed books, eight from each school (4 Maths books and 4 English books from school), the following were found. Some teachers made constructive comments as they provide feedback to learners. Mostly, in subjects whose assessment required learners to express their knowledge through essays, teachers commented on classwork books and scripts to show learners their weaknesses. The comments also suggest ways in which learners could improve as shown in Figure 4.1 below.



**Figure 4.1:** Formative feedback

Some teachers, on the other hand made learners repeat the assessment until they met what was expected from them. This was explained in the focus group discussions as follows:

Participant 5A opined:

*Sometimes I give learners some questions because I assume they might have missed a question somehow due to limited time, then I assess how they answer questions when they are relaxed. Sometimes I find out that they didn't finish because of time, and examination fever which they panic. From there I encourage them to manage their time when they write examinations.*

Participant 1C shared a similar experience:

*After marking, when discovering where learners are weak, we go back to them and make some remedial lessons, especially in compositions.*

In this case, a teacher in School A uses both formative and summative use of feedback. Formative is used when a teacher makes learners re-write questions in a relaxed state to see their weaknesses and address them. Summative use of feedback occurs when a teacher just verbally warns learners to manage their time without coming up with information that can be used to adjust teaching and learning (Schneider & Andrade, 2013). Formative does not focus on time taken by learners to complete a task, it talks to how a learner was able to perform a task (achievement criteria) (Klute, et al., 2017).

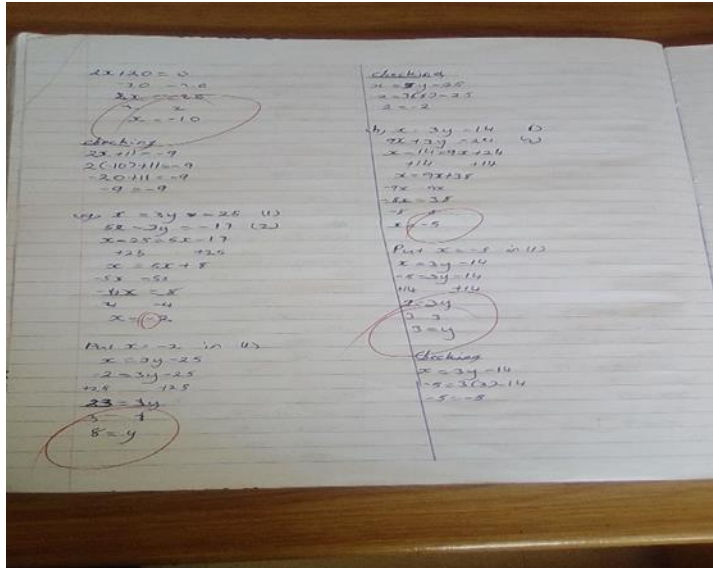
Participant 1C also used feedback as follows:

*After assessing learners, we mark them and after marking we give them feedback and discuss what they were supposed to write instead of what they have written.*

Participant from 6A in a focus group concurred:

*By the time we teach, we ask questions to learners, their responses will show whether they are still on right track or not.*

As indicated on learners' scripts, some teachers provide feedback that is so implicit that it leaves learners confused as to whether they got the answer wrong or they have missed some of the steps leading to the correct answer, or the answer is totally wrong. This is shown by Figure 4.2 below.



**Figure 4.2:** Summative feedback

This kind of feedback does not enable learners to improve their progress on their own, unless a teacher clarifies the feedback. The results from the analysis of learners' scripts further revealed that in other subjects, mainly mathematics, teachers use only ticks and crosses to mark learners as right or wrong, with marks provided on each script to grade learners' work. This kind of feedback is implicit too as it does not guide learners on their individual weakness, and does not suggest way of improving.

Feedback is also used as a tool to describe whether and how learners have met learning intentions. This is explained by findings from interviews below.

Participant 1C affirmed her use of feedback as follows:

*We always motivate them after they have received their feedback. We encourage them to put more effort into their work when they have not done well, and all those.*

Participant 2C added:

*We try as teachers to tell them to work harder. Sometimes we call those who performed better by their names, trying to make others work harder.*

Participant 3C also explained:

*We also provide incentives to those who did well as motivation, so that others can strive to work harder.*

Participant 4C maintained:

*And even when some are improving, obtaining better marks, we give them incentives to make them aware that we recognize their progress.*

#### **4.4.2.2 Findings from analysis of record books**

The findings from the analysis of record books revealed that no progress levels are recorded, marks are only recorded for grading and accountability purposes. Marks for every subject are recorded after every quarterly examination and are used at the end of each grade to decide whether learners proceed to the next level. In formative assessment terms, there should be a clear record of every learner's strengths and weaknesses, and skills and competences that the learner has acquired, until the desired progress level is reached (Klute et al., 2017). Preparation books were also analyzed to find out how teachers prepare for formative assessment. The results indicated that teachers mostly plan for assessment strategies that do not enable them to monitor learners' progress, and rarely use presentations and project writing as the strategies that enable learners to monitor their own progress. Based on learning intentions, there were no clear guidelines such as rubrics shown in teachers' preparation books that are used to assist learners to evaluate their progress. It is evident that some teachers provide feedback in the form of grades. These are some of the indicators that teachers use feedback for summative purposes because grades only focus on achievement of learners, rather than their improvement in learning.

The findings revealed that teachers use feedback formatively, though their goal of assessing is more based on summative assessment. This was also confirmed by methods which seemed to be regularly used. Such methods include group work, in which learners assess each other (peer assessment) and provide feedback to each other (peer feedback) within a group. This provides chances for some learners to assess their own progress (self-assessment) as they learn from other learners' strengths and weaknesses. In addition, assessment through observation and in practical subjects such as computer and agriculture enable a lot of self- assessment and peer assessment because learners are assessed while demonstrating skills. Teachers are able to identify learners' progress by observing them do things practically as they show analytical skills.

Teachers also indicated that, they provide feedback in written form, either in learners' exercise books or on scripts to enable learners identify their weaknesses and provide steps that lead to desired performance level. This data is disputed by data from learners' scripts and classwork books which indicate that teachers imperceptibly show comments leading to correct responses on learners' scripts and classwork books. Analyzed scripts in different subjects revealed that, teachers provide feedback differently depending on subjects and individual teachers.

However, formative assessment requires clear record of learners' progress in terms of strengths and weaknesses (Klute, et al., 2017). Documents such as teachers' record books and preparation books were analyzed to confirm interview data on how teachers monitor learners' progress as the key documents that show a clear record of progress made by learners from the beginning until they reach desired progress levels, how best assessment strategies are used to mark each learner's progress and provide a clear criterion that can be used to gauge learning progress.

Both interviews and analyzed documents revealed that more often, feedback that is provided to learners is not explicit enough to show learners' weaknesses and strengths. Teachers rely on summative use of feedback where they provide marks or grades, and mark learners as right or wrong. Further, the findings revealed that teachers still use incentives to motivate learners who do well. In this case, learners who always achieve less marks in a test and those who never get questions right in class never receive any motivation from their teachers. Preparation books and record books also indicated minimum monitoring of learners progress, with no progress indicators based on learning intentions.

#### 4.5 INFLUENCE OF ASSESSMENT PRACTICES ON CURRICULUM DELIVERY

Effective curriculum delivery involves the incorporation of assessment, teaching, and learning. As encouraged by CAP (2009), there is a need for assessment practices to ensure the enhancement of learning activities and attainment of curriculum goals and objectives. In response to how assessment practices influence curriculum delivery, participants had different views and explained how assessment practices they engage with lead to ineffective curriculum delivery. Participant 6B affirmed:

*Most of the time we realize that we assess if learning has occurred and when we are delivering our content, we deliver it, making sure that assessment that we are going to use is going to reflect what learners have learned.*

Focus group results also indicated that, there are some teaching strategies that enable teachers to deliver content, while at the same time applying formative assessment. Although presentations enable both assessment, teaching and learning to occur simultaneously, they seem to be wasting a lot of time to deliver more content as explained by teachers.

Participant 1A expressed:

*Sometimes some assessment methods work, while sometimes they don't e.g. verbal assessment on presentations wastes a lot of time. However, learners obtain deeper understanding as assessment that is done at the same time with presentations enables them to obtain immediate feedback. Presentations waste time to cover a syllabus but to some extent they enable us to deliver the curriculum effectively as learners are able to obtain critical thinking and analytical skills when they use presentations.*

The quote suggests that feedback being the assessment information is obtained immediately and authentically as presentations are carried out because learners can judge themselves based on how other learners presented. Peers can also judge other learners when progress indicators are clearly explained to them prior to presentations. In this way, the curriculum is delivered effectively because teaching, learning, and assessment occur simultaneously.

Participant 3B similarly affirmed:

*Some strategies like presentations allow learners to judge themselves even before their classmates can comment, they learn from those who presented first. With time, presentations become more fun. However, presentations waste a lot of time as a result we seldom use them.*

Another assessment practice that seems to be time consuming, though formative, is group work. Participants indicated that a lot of time is taken to deliver curriculum when grouping is used. As concurred by Participant 3C:

*Groups waste a lot of time especially when learners do not understand or delay doing the work, we end up giving them solutions because we are in a rush to complete the syllabus.*

The above discussions suggest that formative assessment is ineffectively practiced as teachers seldom use assessments that enable learners to judge their progress and progress of their peers as

they work together. It is evident that group work is not encouraged in some lessons. This is confirmed by results from observations in which one observed teacher in School C did not encourage group work in her lessons, instead she preferred verbal assessment in which learners only provided yes or no questions without any justification to their responses. In that regard, assessment was purely summative because a teacher kept on providing answers when learners delayed responding.

In contrast of the above discussion, it is evident that teachers use assessment to deliver curriculum differently. Strategies that do not work for some teachers are preferred by other teachers.

Participant 3B argued:

*We still apply a lot of lecturing; however, we try by all means to arrange learners in groups to allow them to assess themselves and their peers as it simplifies work for teachers*

Although the above quotation suggests that the teacher in School B tries to use formative assessment, all teachers in that school did not agree to be observed, what they said they practice in focus group interviews could not be confirmed. For example, in his quotation, Participant 3B even lacked good terminology of the types of assessments practices used in his school.

However, the above quotation is confirmed by observation results of Participant 1A in which learners were arranged in groups, and the assessment worked very well. Although the assessment was verbal in that lesson, the teacher provided learners with some time to make discussions after a question was asked. Learners would then raise their hands after agreeing on one correct response. A teacher also asked questions that enabled learners to justify their responses. Learners from other groups were able to judge responses from other groups as correct or wrong and were able to correct each other.

In line with what was observed from School A in Participant 1A's lesson, findings from focus group discussions also revealed that some teachers allow self-assessment of learners while some teachers rely more on verbal assessment to gauge learners understanding rather than progress.

Participant 1C stated:

*We only try to ensure that assessment is learner-centered, we let learners do the work themselves, assess themselves, and make corrections on their own.*

Participant 4B argued:

*With the caliber of students that we teach, it becomes very difficult for us to avoid verbal assessment strategies that require yes or no responses because most of them cannot even express themselves*

The above quotation was confirmed by observation results from School C, where a teacher ended up justifying the ‘yes or no’ responses provided by learners, only because learners could not express themselves. When they were asked to give reasons for their answers, they just kept quiet for some minutes, until a teacher provided responses. This too made assessment in that particular class summative.

Participant 2C shared a similar experience:

*However, a learner-centered approach to either teaching or assessment wastes a lot of time as we have to complete the syllabus. ECoL assesses more content.*

It, therefore, seems like teachers are not intended to use formative assessment at all because their main focus is to cover more content than to ensure that learners too progress from one level to another while at the same time content is covered.

On the contrary, Participant 1B observed:

*Teaching becomes more effective when we assess regularly, we are able to see when learners understand or not so that we can change our methods where necessary or arrange for remedial classes.*

To some teachers, formative assessment positively influences the way in which they deliver the curriculum. As teachers assess regularly, learners get used to assessment and as a result, they assess each other in groups even when teachers have not assigned them some work. They find questions themselves.

Participant 1A posited:

*For me, there is a positive influence. When I have given them feedback, they improve on the next assessment, and I am able to move to a new concept knowing that they have understood.*



Participant 1B added:

*With time, learners mostly improve as they get used to assessment, they are always prepared to answer questions in class, either verbally or through writing. They tend to enjoy assessment more especially when they assess their peers in group work.*

One of the features of formative assessment is to ensure that the assessment is authentic enough to enable learners to show progress in skills learned (Klute, et al., 2017). As a result, assessing by doing is authentic because a teacher asks learners questions that would enable them to experience what they have learned in class.

Participant 2A maintained:

*If we are focusing on typing speed, a learner who used to take an hour or two hours to type a page ends up taking less time when they get used to being assessed on that skill. They get used to using a keyboard under pressure of time.*

On the same issue that regular assessment enables learners to improve, Participant 2B similarly affirmed:

*In experiments, learners are able to judge when others go wrong, or may even judge themselves as they are able to give me reasons why some things couldn't work out.*

It is also evident that teachers do not consider individual progress of learners as important, they regard some learners to be not serious about their work, and such learners do not show any improvement in learning.

Participant 3A argued:

*Sometimes some learners don't care, as a result such learners do not improve.*

As curriculum and assessment directly influence each other (MOET, 2009), ineffective application of assessment may lead to ineffective curriculum delivery. Findings revealed that, teachers use assessment methods that enable them to cover a larger content within a stipulated time. As a result, formative assessment remains ineffectively practiced. They try by all means to avoid methods that require more time from learners to complete a task. It is also evident that, the practice of teaching and learning is teacher-centred, and full of lecturing. Thus, assessment in

such classes is also not formative enough to show progress in learning. It is summative with some little elements of formative assessment in which verbal and written assessments require learners to justify their responses to a very limited extent. Some teachers seem to provide regular assessment to learners, though it is still summative but, when assessment is done regularly, both teachers and learners see improvement in learning.

Findings further revealed that formative assessment is mostly practiced in practical subjects as the nature of subjects suggests that learners learn by doing. Assessment in this case is said to be authentic as it enables learners to demonstrate knowledge and skills learned in other lessons. As learners experiment, and perform activities, teaching and learning, and assessment occur simultaneously because for them to move to the next step, the teacher has to ensure that learners are able to perform a certain step before moving to the next. Then, learners progress to the next step if they got the first step right. It is in this case that a teacher focuses on individual learners' progress because learners who struggle would be assisted as individuals or individual groups whereas others would progress to other steps. Results also revealed that learning by doing encourages self and peer assessments where learners are able to identify each other's weaknesses and provide assistance where possible, a teacher just intervenes.

#### 4.5.1 Effects of learner teacher ratio and pressure to finish the syllabi on the application of formative assessment

Findings of the study indicated that learner teacher ratio and pressure to finish the syllabi mostly affect the application of formative assessment in schools. As revealed by participants in focus group interviews, it was made clear that, over and above learner teacher ratio, assessment practices in most classrooms are highly influenced by pressure brought by ECoL on teachers to finish the syllabi. Participants discussed how learner teacher ratio and pressure to finish syllabi influence formative assessment.

Participant 6A pointed out:

*We teach large classes, as a result, the way in which we teach is affected by number of learners. When there are too many learners, I prefer methods that would allow me to move faster.*

She further explained:

*When I teach a subject in a particular grade, I must teach all the streams. For example, I teach Sesotho in Grade 8, Grade 8A to grade 8D alone, I don't share it with anyone.*

*If there are 120 learners, it is not easy to mark 120 'meqoqo'[essays] several times. Thus, large class size influences formative assessment negatively.*

Participant 1B opined:

*Depending on the system that our school had adopted, the ratio of learners to teachers is too high. When classes are large, it is not possible for a teacher to apply other assessment methods.*

Participant 2B stated:

*Many concepts in the curriculum are learner-centred, but because of large classes, we end up using teacher-centred methods*

Some teachers teach manageable classes and their assessment practices are not affected by large class size. Nevertheless, such teachers still do not effectively use formative assessment.

Participant 4C opined:

*We have very small classes, 30 learners per class at most. That small number of learners would enable us to practice formative assessment, but our assessment methods are highly influenced by examinations provided by ECoL.*

Examinations put much pressure on teachers as they must complete the syllabi before learners write external examinations. As a result, teachers use certain assessment methods that enable them to cover larger content within a short time. They also avoid assessment methods that seem to require more time from both teachers and learners.

Participant 3B stated:

*Experiments enable us to assess a larger content than other methods because what one would assess through questions for some days is covered within one session of experiment, and as a teacher I explain here and there.*

Participant 2B added:

*Experiments enable learners to learn by themselves and assess their progress, then we summarize at the end.*

Rather than influence that assessment methods have on instruction, teachers made clear that, more than anything else, examinations highly influence their assessment practices. Participant 4C explained as follows:

*In brief, our assessment methods are influenced by examinations offered by ECoL at the end of Grade 11.*

Participant 1A added:

*According to ECoL, in order for a learner to obtain A\* they have to obtain certain marks.*

Participant 2C reiterated:

*We have to complete the syllabus because ECoL assesses more content*

Comments from teachers indicate that high learner-teacher ratio is not common to all teachers, and all schools as school C has few learners in each class. The ratio mostly affects assessment in large schools in which a grade is streamed into four classes and one teacher is assigned to teach one subject to all the streams. This highly affects assessment in general as teachers avoid to regularly assess learners, and therefore rely only on summative assessment after using teacher-centered teaching methods that enable them to cover a larger content within the time stipulated in the syllabi. Findings also reveal that teachers feel pressured to complete the syllabi as ECoL assesses all content, whereas the CAP requires assessment to be done for learning purposes, not for certification. Thus, teachers choose teaching, learning and assessment strategies that enable them to cover more content. As examinations seem to have significant influence on daily assessment practices, schools that have fewer learners in classrooms also feel pressured to ensure that learners obtain better grades by engaging on assessment that enables learners to perform well at the end of their secondary education.

#### **4.6 TEACHER PREPAREDNESS TO USE FORMATIVE ASSESSMENT**

Given the varied application of the formative assessment, it was prudent that the study responds to whether the teachers feel adequately prepared to implement CAP 2009. Findings of the study revealed that teachers were differently trained for implementation of the CAP. Some were trained

by NCDC officials for three days and were given mandate to train colleagues in schools. This differentiated training did not work as noted below.

Participant 1A narrated:

*The trainers did not know anything about formative assessment e.g. we asked them about how to assess learners formatively as we leave our usual assessment, and how are we going to decide on whether a learner has to proceed to the next class or not. They didn't tell us what to do. They just said learners don't have to repeat a grade because at least there is something that they know. As a result, we are still using our old assessment which we have been using before the implementation of CAP.*

She continued to illustrate:

*The ministry brought to us what they did not do any research on before, they had not even planned for it as we attended workshops once for 3 days at beginning of implementation.*

She went further:

*For example, in our geography teachers' association, we invited one person from NCDC, the one who trained us, just to explain the assessment further, that person couldn't give us what we are to do. He had no picture of where we are coming from and where we are going.*

Participant 1B stated:

*Training was not enough. NCDC had even promised to visit our schools but they never did that. We are still using the old methods of assessment that we have been using prior to CAP, we don't know how they would expect us to assess or mark learners*

Participant 1C noted:

*We don't feel trained at all because even when one wants to refer to inspectors when they have visited our school, they do not know anything about formative assessment, they want to know from us. They keep asking what was said during training, they are not equipped enough to assist us.*

Participant 2C added:

*Even on training sessions, we were training ourselves, NCDC personnel would just give us a matter to discuss upon, then we would work in groups to find out how we could teach and assess a concept. Then conclusions were drawn based on one group decisions which seemed to be better. We were not even sure if that is going to work.*

Participant 3C maintained:

*No one knew about formative assessment including NCDC and MOET.*

Participant 4C explained:

*They would just say “what do we do”, “what are we going to do in our schools”, let us try to help each other.*

As noted from the responses, this lack of proper training automatically affected those who ought to be trained by these workshop attendees. Teachers who were trained by colleagues who attended workshops commended as thus:

Participant 3A posited:

*We feel untrained as well because those who were trained already lack understanding, as a result, they cannot even answer our questions as NCDC failed to explain formative assessment during training.*

Participant 3B:

*We just follow our colleagues, we are not even sure if they are doing what is expected, we are not sure if we are also doing what is required.*

Irrelevant training makes even more challenging implementation of formative assessment. As a result, some participants thought that the issue of training should be addressed by relevant authorities.

Participant 2C suggested:

*Since we were not trained on how to assess or mark learners based on learning progress, such training would be highly appreciated.*

Participant 2B made an additional contention:

*MOET with NCDC does not even continue to train teachers because the training was done once for some days at the beginning of implementation, which was even insufficient.*

On the same issue of training, participants thought that competence level of trainers is important towards equipping teachers with understanding of how formative assessment should be effectively implemented, highlighting that when trainers themselves are incompetent, teachers' concerns and questions that relate to application of formative assessment remain unanswered. As a result, teachers find it insignificant to adopt a policy which is not even clear to people who introduce it.

Participant 3B explained:

*Even trainers themselves were not competent enough to give us what is correct. They even made arguments amongst themselves, or stop a session to discuss. They were not even sure about what they deliver to us. They couldn't answer our questions, they would just tell us that their intension is to deliver as they are instructed to. As a result, even when schools have students who learn better by doing, our schools do not have enough equipment or materials to assist them with their interest, so that their assessment would be authentic enough to enable them to reach required performance levels in their own learning style.*

Based on findings, it seems like no one was prepared to implement formative assessment, both teachers and MOET. Teachers received insufficient training on how to implement formative assessment in schools. Those who received continuous professional development consider training as irrelevant with no influence on the way in which they assess learners. MOET, on the other hand, did not do enough to ensure that NCDC understands formative assessment for effective training. As a result, teachers received inadequate and irrelevant training in which nobody knew what is supposed to be done in a classroom when assessing learners based on CAP (2009). Time for training was also not enough for teachers to understand what they are expected to do when they got back to school. A one-week or 3 days once-off training, with no regular visits to schools by NCDC officials was insufficient for teachers to be competent in applying the revised assessment regime. School visits would enable both teachers and curriculum developers to see if the policy is effectively implemented and to assist teachers who do not understand.

Results further revealed that, teachers who were trained by their colleagues who attended workshops feel not trained at all. The concept sounds new to them because they could not even explain the concept. Even if training was insufficient, the concept could be understood through regular visits by inspectors, but findings indicated that, their schools are rarely visited by inspectors who also do not know anything about formative assessment when teachers need assistance.

Besides inadequate training, findings revealed that, teachers do not effectively apply formative assessment as examinations are not based on formative assessment but are purely summative. Participants indicated that there is a lot of tension between ECoL and NCDC expectations which results in ineffective application of formative assessment. While most participants reflected deeply that formative assessment does not correspond with what ECoL requires, some of them thought that may be after old assessment policy is faced out, MOET may concentrate on enhancing training sessions by equipping trainers from NCDC with better understanding of formative assessment. Mostly, participants contemplated that unless NCDC and ECoL work jointly, the policy may never be effectively implemented as their goals are different. NCDC aims for improved learners' progress without consideration of grades, while ECoL focuses on achievement of learners in terms of grades for transition in to the higher level of education.

Participant 2B confirmed:

*ECoL and NCDC work in isolation, each with its own goals different from one another. NCDC expects us to use formative assessment, ECoL on the other hand expects learners to write examinations. There is a lot of contradiction.*

Participant 1A made an additional assertion:

*CAP requires teachers not to assess learners by marks only, but external examinations are based on marks. The two things are conflicting. Thus, formative assessment is not effective at all because at the end, learners' progress is judged by marks.*

Due to contradiction between NCDC and ECoL in regard to assessment, one participant makes the following suggestion:

*ECoL also should change a way of assessing or should work hand in hand with NCDC.*



In the quotation, a participant seems to believe that reluctance of NCDC to conduct more workshops nor visit schools relates to complexities of administering two policies (Form E and Grade 11) concurrently. She is also of the opinion that, at least after Form E is phased out, NCDC would have a clear direction of how to meet ECoL's standards while on the other hand prioritizing use of formative assessment.

Teachers as the implementers of the policy remain in dilemma of teaching to the tests or working towards improving learners' progress.

Participant 5B commented:

*We really do not know what is expected from us by NCDC.*

In addition to the confusion caused by NCDC on teachers, Participant 5A ascribed her failure to use formative assessment to reduced number of years while syllabi that learners have to be formatively assessed on remains lengthy:

*Grade 8 is a general first year, we are just wasting time there because when learners get to Grade 9 we find a totally different thing from what was done in Grade 8. Why wasting time on Grade 8, yet assessment and curriculum are different from what we are supposed to do in Grade 9 and all other years? This shortens the number of years in which learners could show progress. Time is so much insufficient for formative assessment to be implemented in schools, looking at requirements of examinations.*

Similarly, participant 6B declared:

*There is too much content to be covered, while time in years is reduced.*

On the same issue of reduced number of years, participant 4B expressed:

*Examinations have not changed from COSC, the only difference lies with the reduced number of years to write the so called LGCSE.*

It is therefore evident that reduced number of years to deliver the same content that was delivered in five years negatively affects the practice of formative assessment in schools in that, if teaching time is reduced, then formative assessment would also not be effectively applied as it requires a lot of time to focus on individual learners progress. Apart from reduced time, more opinions were

laid down by participants, citing end of level summative examinations as the major factor that trivializes the importance of application formative assessment in teaching and learning.

Participant 4B affirmed:

*There is no difference between Grade 11 examinations and the COSC, though daily assessment methods are different. Even end of year examinations are administered the same way, and the manner in which we mark and allocate marks is still the same.*

The quotation suggests that, although a new assessment policy was designed, the assessment part has not changed, it is still conducted the same way it used to be during COSC.

However, Participant 1A made clear that formative assessment seems to be a good practice to adopt if it was linked with curriculum requirements:

*I personally don't have a problem with formative assessment, but based on curriculum requirements, assessment that we are practicing is irrelevant.*

More suggestions were made citing lack of planning among other issues to be revisited by relevant authorities.

Participant 1B stressed:

*Formative assessment is good but the way it was implemented is not good, it was not planned for. It was just imposed with expectations that outcomes will be good.*

The above quotation suggests that, unless MOET revisits its implementation strategies of CAP, application of formative assessment might remain a challenge to secondary school teachers. On the same issue of planning, a participant from a focus group in School C shared her experience that, at the beginning of implementation, they struggled with a new lesson plan format which focuses on assessment of individual learner's progress which also seems to be irrelevant, based on how learners are assessed by examinations council.

A participant's narration went as follows:

*Planning seemed irrelevant, since the lesson planning which we were required to do is irrelevant from what we are doing in our school. We ended up not planning. The lesson*

*plan format which they gave us seems to focus on individual learners' progress, which we do not currently do. It does not work at all.*

Due to lack of understanding by people who disseminated information in relation to implementation of formative assessment, there seems to be no clear link between formative assessment and summative assessment that is practiced by ECoL. Summative assessment is still prioritized over formative assessment because it serves as a bridge between secondary education and tertiary education.

Findings on participants' general views of application formative assessment reflected that the policy was not understood, not only by teachers, trainers failed to train teachers about formative assessment due to their incompetence about the notion. That incompetence was brought by lack of understanding they experienced. Findings further suggested that, the policy was not planned for by MOET, as a result, its implementation was never successful. Another important factor revealed by results is the influence of external examinations towards adoption of formative assessment, teaching and learning in general. Results therefore indicated that, it is a great challenge to use formative assessment while at the end of level, learners' assessment remains summative in which they are expected to perform well in LGCSE. Findings further revealed that, time allocated for teachers to deliver curriculum is very limited as learners are expected to write LGCSE after 3 years because the first year (Grade 8) is a common first year in which learners are introduced to many subjects which some of them are not even offered in their schools. Reduced time also channels teachers to practice one type of assessment, summative which is not time consuming.

#### **4.6 SUMMARY OF FINDINGS**

The current study sought to find out how teachers apply formative assessment on curriculum delivery at selected secondary schools in Leribe, and data from focus group discussions, observations and document analysis revealed two or five key findings on teachers' use of formative assessment in the three selected schools. It has been found out that, secondary school teachers are faced with a challenge of lack of understanding of formative assessment. As a result, formative assessment is not properly implemented in schools, while some schools do not practice it at all. Those who use it, only try to improve learners progress in the summative assessments practiced in their schools. This was evidenced by assessment policies in their schools that focus

more on grades than learning progress. Assessment policies in schools only bind teachers to assess learners' quarterly, while daily classroom assessments are not compulsory. As a result, teachers choose teaching and learning methods that do not provide learners time to work on their own, as they waste a lot of time.

Further, it has been reported by participants that, no training was received on formative assessment, as result, they failed to describe a step-by-step application of formative assessment, explaining that no training was provided on how assessment should be done. Observations and document analysis also revealed that teachers ineffectively apply formative assessment as learners' progress is not recorded, instead marks are used to mark learners' improvement. Learners' scripts also showed that teachers do not provide constructive comments as feedback, they mostly use marks to show learners performance. It has also been found out that, factors that hinder effective adoption of formative assessment are high learner-teacher ratio, lack of training and pressure of examinations.

Finally, teachers' general views suggested that, when a new policy is introduced, the expectation is that they should be provided with enough support in the form of training, and regular visits from inspectorate to help them understand what is expected from them. The policy also must be made clear to them before they can be trained on how to implement it. In addition, people who are responsible to orientate teachers on the new policy need to have better understanding before they train teachers. Normally, teachers have a challenge transferring what they have learned from workshops to class, therefore they need to be assisted by inspectors until the concept is properly implemented.

## CHAPTER 5: DISCUSSION, CONCLUSION, RECOMMENDATIONS, AND LIMITATIONS OF THE STUDY

### 5.1 INTRODUCTION

This chapter presents the discussion of study findings, conclusion, recommendations and limitations and a summary of the study. Importantly, the findings are discussed based on research questions, literature and theories guiding the study. The chapter further discusses conclusions drawn from the research findings and proposes recommendations to improve practice. Finally, study limitations are discussed.

### 5.2 SUMMARY OF THE STUDY

Chapter 1 introduced the study, highlighted teachers' application of formative assessment in schools, gave the background of this phenomenon, and presented the problem statement together with research questions and objectives of the study, and the rationale behind the study. It further presented a brief description of the theoretical framework, a preview of the methodology and limitations of the study followed by an outline of chapters and a summary of the chapter.

Chapter 2 delved into the theories that underpin the study, showing the classroom assessment strategies they advocate as per formative assessment, together with their strengths and weaknesses. The chapter also provided a review of literature related to the study which includes studies from other education systems, about how formative assessment is implemented by countries around the globe.

Chapter 3 explained in detail the methodology underlying the study; research paradigm, approach, and design. It discussed how participants were selected for observations and interviews, and how data were analysed. Discussions on trustworthiness and ethical considerations followed. Possible methodological limitations and summary were lastly presented by the chapter.

Chapter 4 presented the findings on how the Lesotho secondary school teachers use formative assessment to deliver curriculum; the assessment strategies they use, the challenges they come across while implementing formative assessment based on CAP (2009) prescriptions, and the suggestions on how formative assessment can be effectively implemented in schools. The presentation of findings is based on themes that respond to the research questions of the study

Chapter 5 provided a discussion of the study findings, followed up with the literature to address research questions. It also presented conclusions and recommendations and highlighted the limitations of the study.

### 5.3 DISCUSSION OF FINDINGS

The discussion of the findings is linked to the research questions and details of how each research question was addressed are provided. The main research question is articulated as follows:

How do teachers use formative assessment to deliver the curriculum at selected secondary schools in Leribe?

#### **Subsidiary questions**

1. What understanding do secondary school teachers have of formative assessment?
2. How do teachers use formative assessment to facilitate teaching and learning in their schools?
3. How do assessment practices in selected schools influence curriculum delivery?
4. What are the influences on teachers' preference for certain assessment methods?

#### 5.3.1 Teachers' understanding of formative assessment

The study has found that the teachers have limited understanding of formative assessment, and their assessments are still summative. To some teachers, the notion sounds new, while those who are familiar with the term define it differently. However, their definitions indicate that any assessment that takes place during teaching and learning is regarded as a formative assessment irrespective of the strategies used. Some elements of formative assessment such as instructive feedback and a record of learning information were not included in teachers' definitions of formative assessment. The definitions of formative assessment provided by teachers and descriptions of daily assessment practices, partially correlate with Cotton's (2013) definition of formative assessment which indicates that formative assessment enables a teacher to judge the learners' progress and to adjust teaching to meet their needs as pedagogical activities are carried out. However, they fall short of the definition by Vjollca (2019) which describes it as the collection and examination of data related to learners' acquisition of knowledge and skills throughout the learning process.

The study further found out that, assessment policies practised in schools focus only on grading and accountability and put less significance on the learning progress. However, teachers elaborated on their daily assessment practices and teaching methods which revealed that they practised formative assessment to some extent. Teachers' inability to define formative assessment suggests that they did not understand the policy (CAP, 2009) fully. As a result, it is not implemented properly. Fullan (2007) cautioned that a lack of understanding of policy causes a lot of frustration and confusion for teachers, leading to poor implementation. Effective adoption of a policy occurs when individuals implementing it find the meaning of what should change and how that change is expected to occur (Fullan, 2001).

The findings further indicate that assessment policies in secondary schools are still based on the summative assessment as it is still done quarterly and that teachers voluntarily assess learners regularly. This finding complies with the provision of CAP (2009) which encourages the use of summative assessments in terms of quarterly tests. These results resonate with Hung, Hoang Ha, and Thanh Thu (2018) who found out that, teachers develop their understanding of formative assessment because national assessments focus mainly on achievement of learning and awarding of certificates. Similarly, in the study conducted in Turkey, Yasar (2017) also found out that, low understanding of formative assessment is not only experienced at the field level, but even prospective teachers have insufficient understanding of formative assessment which is observed through their inability to define formative assessment strategies.

The findings further uncover a lot of misunderstandings about teachers' practices and choice of assessment methods used daily. Teachers have an understanding that the appropriateness of assessment methods is determined by their individual preferences. Some of the assessment methods are chosen based on three issues; 1) appropriateness for a particular subject, 2) a belief that they are not time-consuming and, 3) learners' level of understanding.

### 5.3.2 Teachers' use of formative assessment

The study found that formative assessment strategies were visible during the lesson observations and were also revealed during the focus group interviews. Some were also visible in documents such as learners' scripts that were analysed. However, the results highlight that teachers use formative assessment ineffectively to facilitate teaching and learning, and that, the notion of

formative assessment was new to some of them. As a result, they failed to describe how a step-by-step application of formative assessment is carried out to improve learners' progress.

The findings further reveal that all teachers were able to share learning intentions, while some teachers' assessment practices were solely summative as progress indicators were not communicated. When learning goals are explained, learners can set their targets. ECoL and Burdett (2011) also suggest that teachers, on the other hand, should be able to assess learning progress based on assessment intentions. With regard to the communication of progress indicators, Klute et al (2017) posited that whenever a teacher manages to collect all information related to learning, evidence of knowledge and understanding that a learner has acquired, and behaviour shown by learners are the indicators of their progress from one level to another.

Additionally, results revealed that in most of their lessons, teachers encourage learners to work together but fail to provide guidelines on how to undergo healthy peer assessments. Coombe et al. (2012) argue that learners should be taught how to effectively assess their peers and their work. Birjandi and Siyyari (2010) regard self-assessment and peer assessment as ways in which educational assessment goals and learner-centred approaches are recognized easily. Peer and self-assessments promote active learning which constructivists call for. Constructivists maintain that when learners are actively involved, they can take responsibility for their learning (O'Sullivan & Stoyhoff, 2012). An additional finding indicates that, as learners wrestle with the exercises given, teachers regularly intervene to scaffold the learning experience. Regular intervention is one of the attributes of formative assessment that enables teachers to gauge learners' progress closely as it occurs (Klute et al., 2017).

The way teachers provide feedback to learners to improve their progress indicates that their way of providing feedback has not changed even after the introduction of CAP as it is both formative and summative and in verbal and written forms. This finding suggests that teachers' assessment practices are incongruent with CAP (2009) prescriptions. The way in which teachers apply formative assessment does not comply with the CAP's prescriptions which read thus, "feedback on the learning progress should be used to formulate strategies that will improve the teaching and learning processes" (Ministry of Education and Training, 2009, p. 4).

The results further reveal that, while teachers provide regular and timely feedback, some mark with ticks and crosses, and provide marks as indicators of learners' achievement levels. This



finding suggests that teachers' use of feedback is summative in nature. UNESCO (2013) maintains that provision of marks to learners is meant to rank order them according to their performance, to promote them to the next class and finally for certification. Marks do not show where learners must improve in order to progress from one step to another. Asamoah et al. (2019), Hung et al. (2018), and Stewart and Houchens (2014) assert that grading learners' work is of low significance to formative assessment, while provision of progress levels is the major facet.

The findings also reveal that some teachers provide comments as they mark learners, depending on the subjects they teach. This finding correlates with Schneider and Andrade's (2013) suggestion that feedback should be provided such that it addresses learners' weaknesses. In addition, Ferguson (2011) emphasises that feedback, if effectively provided, improves learning progress. Omorogiuwa's (2015) findings comply with the findings of this study in that teachers were found to use feedback that has comments which encouraged learners to work as they received guidance on how to improve performance. As a result, they improved on what they were assessed.

### 5.3.3 Influence of assessment practices on curriculum delivery

The study found out that examinations put much pressure on teachers as they must complete the syllabi before learners write external examinations. Khairani (2017) also observed that examinations highly influence daily assessment practices as teachers must apply formative assessment and at the same time ensure that learners meet examination requirements. Findings further indicate that teachers use certain assessment methods that enable them to cover larger content within a short time. From a similar study, Izci (2016) proposed that, instead of focusing assessment on learning, teachers should look for assessment practices that enable them to cover larger content that is required by examinations. The need to cover large content shifts the emphasis away from knowledge, skills and competencies to learners' rote-learning and ability to recall.

Results further reveal that some assessment practices are perceived as time-wasting, and as a result, teachers prefer assessment methods that allow them to cover curriculum within a stipulated time. Teaching strategies such as presentations and grouping are not preferred by some teachers because they are very time-consuming although they enable assessment and curriculum delivery to take place at the same time. Additionally, teachers who use grouping to deliver curriculum

enable learners to assess their peers, and teachers to assess learners' progress from those group conversations. This aligns with Izci's (2016) results which show that curriculum is too crowded while time is limited for teachers to deliver such a curriculum; hence, formative assessment practices are sacrificed.

Izci (2016) believes that if curriculum developers have a strong believe in formative assessment, they could provide activities that promote formative assessment, and enough time for those activities to be carried out. However, his findings uncovered that they provided activities that focus on knowledge acquisition and promote summative assessment. Hence, his study suggested that formative assessment requires reducing teachers' workload, and the pressure of covering the whole curriculum, encouraging collaborative teaching and reflecting on formative assessment activities can reduce the problems of time and overcrowded curriculum.

The findings indicate that teachers avoid assessment methods that require learners to take a long time to complete a task. Thus, irrespective of the requirements of the new curriculum, the practice of teaching and learning is still teacher-centred, and full of lecturing, and assessment in such classes is also summative with some little elements of formative assessment in which verbal and written assessments require learners to justify their responses to a very limited extent. The study also found out that, as curriculum is delivered, teachers mostly rely on verbal assessment which saves time. Vogt et al. (2020) maintain that formative assessment is ineffectively adopted by both teachers, learners and principals due to the examinations-oriented nature of the education systems. Leong et al. (2018) add that learners remain confused by the application of formative assessment as they find no link between how they learn and how it would help them obtain better marks in examinations.

Furthermore, the findings indicate that learner teacher ratio mostly affects the application of formative assessment in schools as teachers use assessment methods that allow them to provide immediate feedback in large classes. This resonates with Figa, Tarekegne and Kebede's (2020) finding that teachers who teach large classes mostly rely on summative assessment due to complexities of classroom management and time. Quyen and Khairani (2017) similarly add that formative assessment requires more time from teachers to concentrate on improving individual learners' progress, which is impossible with large classes.

#### 5.3.4 Reasons behind teachers' preferences of certain assessment methods

Findings reveal that the national examinations are a major factor that influences teachers' preference for summative assessment because at the end, learners are expected to write the LGCSE examinations. A lot of tension between ECoL and NCDC expectations was revealed, which results in ineffective application of formative assessment as NCDC aims for improved learners' progress without consideration of grades, while ECoL focuses on achievement of learners in terms of grades for transition into the higher level of education. The finding resonates with Wong et al. (2020) who found out that, tensions arose in Singapore as new policies were implemented, mainly because the summative culture of examinations mismatched formative assessment principles. Khanare (2012) also observed that the Lesotho education system relies on summative assessments to gauge knowledge and skills acquisition, which motivates teachers to rely on summative assessment. Teachers, therefore, find it unnecessary to invest their time in improving learning progress while at the end learners are exposed to summative assessments. Izci (2016) highlighted that the application of formative assessment is not only affected by the national examinations which are meant to certify learners to higher level, but that local examinations meant to maintain school success and pressure teachers to prepare learners for those examinations. In Izci's terms, learning progress is sacrificed for attainment of better scores as teachers teach learners the tricks and test techniques that would enable them to obtain higher marks in the examinations, and finally use similar questions to those asked in examinations in their daily classroom assessment practices. Finally, examinations cause distortions in the application of formative assessment and break integration of assessment into teaching and learning (Izci, 2016).

Additionally, the study further uncovered a low level of teacher preparedness as a major factor that determines teachers' preferences of assessment methods. Teacher preparedness as explained by participants, results from inappropriate training received by both workshop attendees and teachers who were trained by colleagues who attended the workshops. This finding resonates with Chere-Masopha et al. (2021) and Selepe (2016) who point out that Lesotho teachers have been insufficiently trained on the implementation of CAP (2009). Khairani (2017) points out that, insufficient knowledge of formative assessment from limited training is the possible source of teachers' leaning towards summative assessment. By contrast, the study conducted by Stewart and Houchens (2014) found growth in teachers who attended workshops as they used formative assessment and provided training to others about different formative assessment strategies.

The findings further reveal that the incompetence of teacher trainers left teachers' concerns about the application of formative assessment unaddressed. Thus, the training itself became irrelevant. Irrelevant training is also experienced by prospective teachers from institutions of higher learning as teacher educators' level of involvement in curriculum reforms is limited (Chere-Masopha et al., 2021). It is, therefore, envisaged that teachers' ability to improve assessment practices is determined by the level of training they have been exposed to (Arraffii, 2020).

## 5.4 CONCLUSIONS

The conclusions of the study are drawn from a discussion of research findings in line with objectives that informed the entire study. Outlined below are conclusions based on four research questions that informed the study:

### 5.4.1 Research question one

The first research question required teachers' understanding of formative assessment as it applies to their facilitation of teaching and learning. This study concludes that, teachers' understanding of this phenomenon varies. This could be attributed to many factors like inadequate training. Teachers feel inadequately trained, and as a result, they face a challenge when they must incorporate formative assessment into teaching and learning. Training other teachers who did not attend workshops also remains a challenge in schools when the workshop attendees felt inadequately trained. Inadequate training results from a lack of understanding associated with the NCDC trainers who failed to explain all the requirements of CAP (2009) including how effectively formative assessment can be applied.

### 5.4.2 Research question two

The second research question required how teachers use formative assessment to facilitate teaching and learning. This study concludes that formative assessment is not effectively applied in schools as teachers lack knowledge of the step-by-step application of formative assessment, and their application of formative assessment is determined by the nature of the topic being taught. Teachers mostly provide feedback to learners which is summative as feedback is provided in the form of grades, and teachers use ticks and crosses to indicate learners' strengths and weaknesses. Such feedback does not resonate with formative assessment requirements as it does not enable learners to evaluate their progress. The study also concludes that, to some extent, some teachers provide informative feedback which improves learning.

### 5.4.3 Research question three

The third research question required an examination of how assessment practices in selected schools influence curriculum delivery. This study concludes that curriculum is not delivered according to policy because teachers have not changed their old ways of focusing on marks. This is because ECoL has not changed its method of assessment. As a result, teachers prioritise examinations rather than learning progress.

### 5.4.4 Research question four

The fourth research question needed the reasons behind teachers' preferences for certain assessment methods. This study concludes that teachers are reluctant to apply formative assessment because of inadequate training. Their assessment practices are purely summative with learning progression not considered significant. Teachers only assess to meet ECoL's requirements. Another factor that influences teachers' choice of assessment is high learner-teacher ratio which encourages teachers to use assessment strategies that enable them to provide timely feedback. When a class is too large, teachers avoid assessing it regularly, and tend to rely on quarterly examinations which focus more on grading rather than the learners' progress. A lack of training also affects the way in which teachers apply formative assessment. A lot of confusion was created by the conflicting expectations of NCDC and ECoL, which caused both trained and untrained teachers to use summative assessment because they deemed to be more important as it decides the learners' transitions to higher levels of education. The MOET also does not provide enough support to teachers after the implementation of CAP (2009) as there are no school visits to ensure that formative assessment is applied as prescribed by the policy.

## 5.5 LIMITATIONS OF THE STUDY

The limitation of this study is that I struggled to obtain access to some schools as the principals kept telling me that they would call, which never happened until I took the initiative of going back to their schools again to schedule the appointment with teachers. This was time wasting and costly, though I eventually managed to obtain data that I required. Time and financial constraints also limited me to the three secondary schools only. In one school where the principal allowed me access, teachers could not allow me to observe their lessons as they felt like I am checking up on them, therefore, they only allowed me to continue with interviews only. For this reason, the results reported from observations in the study are from two schools only.

## 5.6 RECOMMENDATIONS

The findings suggest that teachers have limited understanding of formative assessment and how to apply it on their daily pedagogical activities. Therefore, the study makes the following recommendations to address the challenges associated with the application of formative assessment in secondary schools:

### 5.6.1 Recommendations for professional development

- It is recommended that:
  - In-service training be conducted to fully equip teachers with knowledge of how they should effectively enact formative assessments as suggested by CAP (2009). The study further suggests that the Ministry of Education and Training together with the National Curriculum Development Centre should provide ongoing in-service training for teachers annually.
  - Principals are provided with in-depth training on formative assessment so that they could acquire the necessary knowledge and skills that could enable them to facilitate school-based support for teachers. For instance, principals could assist in the formulation of a clear role of assessment in teaching and learning in school policy and ensure that teachers' daily pedagogical activities are in line with the school's assessment.
  - The Ministry of Education and Training should see to it that the Lesotho College of Education and the Faculty of Education at NUL equip prospective teachers with the necessary strategies required for the effective application of formative assessment in line with CAP (2009).

### 5.6.2 Recommendations for regular inspection

- The study recommends that education officers and inspectors should visit schools regularly to oversee how teachers apply formative assessment, to recognize the challenges that teachers encounter before it is too late.
- The study further recommends the introduction of clinical supervision where principals as immediate supervisors can share ideas with teachers and support them to assist each other to improve the application of formative assessment.

### 5.6.3 Recommendation to ECoL and NCDC

- The link between the goals of the NCDC and ECoL should be harmonized so that they can work jointly and come up with common goals that cater to their expectations.

### 5.6.4 Recommendation for further research

- Further research is needed to find out if the way in which teachers apply formative assessment in these three secondary schools compares with how the majority apply it in other secondary schools.
- The study further recommends more research on related topics not covered by my study.

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## APPENDICES

### APPENDIX 1: FOCUS GROUP INTERVIEW SCHEDULE FOR TEACHERS

#### **BIODATA**

1. Gender: Male [ ] Female [ ]
2. What is your highest qualification?
3. How long have you been in the teaching service?
4. Which classes do you teach presently?
5. How many learners do you teach per class?

#### **TEACHERS' UNDERSTANDING OF FORMATIVE ASSESSMENT**

1. What is your school policy on the role of assessment in teaching and learning?
  - a. To what extent is the policy understood and implemented by all teachers?
  - b. What is your understanding of formative assessment?
  - c. What are your experiences of using formative assessment?
  - d. Can you please elaborate on assessment method(s) you use in teaching and learning?
  - e. How useful are the assessment methods that you and other teachers frequently use?

#### **TEACHERS' APPLICATION OF FORMATIVE ASSESSMENT**

2. How do you and other teachers use formative assessment to facilitate teaching and learning in your school?
  - a. Can you elaborate on a step-by-step application of formative assessment in any of your classes?
  - b. To what extent is the application of formative assessment consistent across teaching subjects?
  - c. To what extent is the application of formative assessment consistent across grade levels?

### **USE OF ASSESSMENT INFORMATION**

3. How do you use assessment information (feedback) to improve teaching and learning?
  - a. How do you monitor learners' progress?
  - b. How do you provide feedback to learners?
  - c. How do you ensure that feedback enables learners to evaluate their progress based on learning intentions?

### **INFLUENCE OF ASSESSMENT PRACTICES ON CURRICULUM DELIVERY**

4. How do assessment practices adopted by your school influence curriculum delivery?
  - a. To what extent does learner teacher ratio affect the use of formative assessment?
  - b. What influence do your assessment practices have on instruction?
  - c. What influence do your assessment methods have on learners over time?
  - d. What influences your preference of certain assessment method(s)?

### **TEACHER PREPAREDNESS TO USE FORMATIVE ASSESSMENT**

5. To what extent do you feel adequately trained to use formative assessment in your teaching?
  - a. How were you trained to use formative assessment (e.g. pre-service or continuous professional development (CPD))?
  - b. To what extent do you think your training influences your currently adopted assessment methods?
  - c. Was the training received from the Ministry (NCDC) adequate for your understanding and use of formative assessment?

OR

- d. Was the training provided by teachers (who attended the workshop) sufficient for you to apply formative assessment in class?
- e. What are your general views of application of formative assessment in schools?

## APPENDIX 2: OBSERVATION SCHEDULE

	<b>Key issues</b>	<b>Comments</b>
At the beginning of lesson	A. A teacher shares learning intentions with learners	
	B. A teacher communicates progress indicators	
During the lesson	A. A teacher encourages learners to work together	
	B. A teacher provides guidelines used to assess learners	
	C. A teacher asks questions that require learners to justify their responses	
	D. A teacher provides time for learners to make corrections on their own	
	E. Encourages self and peer assessment	
	F. Provides criteria for self and peer-assessments	
	G. Regularly intervenes	
	H. Asks learners to write down their observations on experiments and justify them	
	I. Asks learners to perform experiments at home and report to class, their progress and support they need	
At the end of the lesson	A. Makes comments that enable learners to reflect on their progress and how to improve on their weaknesses	
	B. Suggests ways in which learners can improve their work	

### APPENDIX 3: DOCUMENT ANALYSIS SCHEDULES

#### Learners' scripts

Key issues	Comments
Do teachers provide feedback that enables learners to improve their progress?	
Do teachers provide constructive comments on learners' work	
Do teachers indicate learners strengths and weaknesses	
Do teachers provide solutions	

#### Preparation books and record books

Key issues	Comments
Do teaching strategies used enable the teacher to monitor learners' progress?	
How do teachers ensure that feedback enables learners to evaluate their own progress based on learning intensions? (use of rubrics)	
Do teachers have a record of individual learner's progress?	
Do teachers have a record of individual learners' strengths and weaknesses?	



## APPENDIX 4: APPLICATION LETTER TO SCHOOLS

### APPLICATION LETTER FROM THE RESEARCHER TO THE PRINCIPAL

4 November 2021

The principal

.....

Dear Sir/Madam

#### REQUEST TO CONDUCT RESEARCH AT YOUR SCHOOL

I, 'Mamakhakhe Lesitsi, am a post graduate student at the National University of Lesotho. I am doing research with Prof. Paseka Andrew Mosia, an associate professor and Head of Educational Foundations Department at the National University of Lesotho towards a Master of Education degree in Testing and Measurement. We request participation of your teachers in the study entitled teachers' application of formative assessment to curriculum delivery at secondary school level in Lesotho.

The study aims to explore how teachers use formative assessment to deliver curriculum in Lesotho secondary schools. As one of the schools in which new curriculum was implemented, your school is selected because it is believed that teachers can exceptionally contribute to the subject matter of the study. The study requests participation of 12 teachers. They will be divided into two groups of 6, for a focus group interview/discussion lasting about 60 minutes. One group of teachers will be made up with teachers who have quite a number of years in teaching service, while the other group will comprise of teachers with fewer (less than 5) years in the teaching service. Among groups of interviewed teachers, one teacher will be selected per group for observations. Therefore, only two teachers will be observed when teaching. Observations will last for 40 minutes per teacher.

Focus group discussions and interviews will be conducted at school at the time convenient to you, your teachers and with minimal disruption to their teaching routines. The name of the school and participants' names will be kept confidential in all academic writing about the study. All data will be destroyed in 5 years after completion of the study.

The study will help teachers to reflect on their experiences and identify challenges which hinder effective application of formative assessment on their daily instruction. As a result, the school administration may come up with appropriate support to assist teachers to properly use formative assessment strategies as suggested by CAP (2009). The study will further help Ministry of Education and Training to look into challenges associated with curriculum implementation in secondary schools and re-visit their implementation guidelines to ensure that formative assessment is effectively implemented.

Yours faithfully

Mamakhakhe Lesitsi

[mlesitsi@gmail.com](mailto:mlesitsi@gmail.com)

63288103/58083476

**Supervisor**

Prof. P. A. Mosia

58969867

[mosia296@gmail.com](mailto:mosia296@gmail.com)

Your cooperation will be highly appreciated.

## APPENDIX 5: INFORMATION LETTER TO TEACHERS

Dear Teacher

I 'Mamakhakhe Lesitsi, am a Master of Education student at The National University of Lesotho. I am doing research on teachers' application of formative assessment to curriculum delivery at secondary school level in Lesotho. The study aims to find out the extent to which teachers use formative assessment following introduction of the new curriculum reform namely Curriculum and Assessment Policy (CAP), which was implemented in secondary schools in 2017. I strongly feel that your experience can add value to this study.

Participation in this study is voluntary, and you are free to withdraw at any time during the exercise without any penalty even if you agreed earlier. If you agree, you will take part in focus group discussions and/ or observations which will last for approximately 60 minutes each. Focus group discussions and observations will be held at your school at the time convenient for you. Both focus group discussions and lesson observations will be audio recorded with your consent. The lesson observation will also be videotaped to capture all non-verbal interactions.

Your name and school name will be kept confidential in academic writing and will solely be used for this study. You are free not to respond to questions which you feel uncomfortable with and which you feel are too personal. Data provided will be destroyed within 5 years after completion of the study. You will not be advantaged or disadvantaged in any way for participating in the study.

Your participation will highly be valued.

Yours sincerely

.....

Mamakhakhe Lesitsi

[mlesitsi@gmail.com](mailto:mlesitsi@gmail.com) (63288103/58083476)

## APPENDIX 6: TEACHERS CONSENT FORM

I ..... agree to participate in the study entitled teachers' application of formative assessment to curriculum delivery at secondary school level in Lesotho. I also give consent for the following:

- Permission to participate in focus group discussion and observation lesson if am selected for the latter.
- Permission to be audio recorded. I agree for audiotapes to be used for this study only.
- I understand that I don't have to respond to every question and can freely withdraw from the study at any time.
- I understand that I can withdraw permission to use data from my interview or observation lesson within two weeks, in that incident, such information will be deleted.
- I also understand that my name and the name of my school will not be revealed, and that information I provide will be kept confidential and safe. My name will be changed and details of my interview or observation which may reveal my identity will be altered.
- I know that data collected during this study will be destroyed within 5 years after completion of this project, and I can access information I provided at any time while it is still in storage.

### **Consent statement**

I have read and understood the above information, and I therefore give consent for the study. I agree to be audio recorded provided my privacy will be protected. I will also not disclose the information shared in group discussions to any person outside the group.

Signed .....

Date.....

## APPENDIX 7: INTRODUCTION LETTER FROM NUL

National University of Lesotho  
Educational Foundations Department  
P.O. Roma 180  
3<sup>rd</sup> November 2021

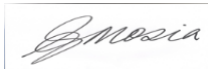
Chief Education Officer, Secondary  
Ministry of Education and Training

### **RE: Mamakhakhe Lesitsi (200501484)**

This letter introduces Mamakhakhe Lesitsi as a student registered in the Faculty of Education for M.Ed. in Testing and Measurement. She is in the final stages of her study and must collect data. Her topic is: **“Teachers’ application of formative assessment to curriculum delivery at secondary education level in Lesotho”** and she wishes to interview teaching staff at two schools in Leribe. She will share with you the following, information letter for participants and a letter of introduction to the school principal.

I will be glad if she gets the support she needs to complete the study.

Yours Sincerely



Paseka A. Mosia (D.Ed.)  
Associate Professor of Inclusive Education  
Head of Educational Foundations Department  
National University of Lesotho  
P.O. Roma 180  
Lesotho  
Cell: +26658969867  
Email: [pa.mosia@nul.ls](mailto:pa.mosia@nul.ls) / [mosia296@gmail.com](mailto:mosia296@gmail.com)

## APPENDIX 8: CEO-TO-DEM INTRODUCTION LETTER

### MEMO

TO : DISTRICT EDUCATION MANAGER-LERIBE  
FROM : CEO-SECONDARY  
NAME : B.M. SEUTLOALI (MRS)  
SIGNED : .....  
DATES : 20<sup>th</sup> January 2022

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#### RE: INTRODUCTION OF MAMAKHAKHE LESITSI

This MEMO introduces Mamakhakhe Lesitsi as a student registered in the Faculty of Education for M.Ed. in Testing and Measurement. She is in the final stages of her study and must collect data. Her topic is: **“Teachers’ application of formative assessment to curriculum delivery at secondary education level in Lesotho”** and she wishes to interview teaching staff at three schools in Leribe namely, Mamohau High School, Laghetto High School and Malibamatšo High School. She will share with you the following: information letter for participants. Please introduce her to the concerned school principals upon arrival. This is to inform you that the Ministry has approved her request.

I will be glad if she gets the support, she needs to complete the study.

Yours sincerely,

BM SEUTLOALI (Mrs.)  
CEO-SECONDARY

Cc RIN

## APPENDIX 9: DEM-TO-PRINCIPALS INTRODUCTION LETTER



**LERIBE EDUCATION AND TRAINING OFFICE**  
**P.O.BOX 12, LERIBE 300**

24 January 2022

To Principals;

Mamohau High School  
Laghetto High School  
Maliba-matso School

Dear Principals

**Data Collection for Master's Degree Research Study**

This is serves to confirm that Ms Mamakhakhe Lesitsi studying is for her master's degree with the National University Lesotho (NUL) and has been granted permission to collect data in your schools. Kindly be of assistance to her.

Thank you.

Sincerely

*M*

**Motlatsi Mosoang (Mr)**  
District Education Manager – Leribe



TELEPHONE: 22400210/22401360

FAX: 22400022

APPENDIX 10: LETTERS OF ACCEPTANCE FROM SCHOOLS



**MAMOHAU HIGH SCHOOL**

P O BOX 768  
LERIBE 300  
CELL (+266) 5320 0990

The District Education Manager  
Leribe 300

Dear Sir

Data Collection for Master's Degree

This serves to confirm that Mamohau High School has allowed Ms Mamakhakhe  
Letsie to collect data for her study.

Yours faithfully

Thuso Selebeli (Principal)







Laghetto High School

P. O. MATSOKU 332

VIA PITSENG

Mrsroelane.laghettohs@gmail.com

Nka Hloloa ke'ng?

17 February 2022

Dear Sir/Madam

This serves to confirm that Mrs 'Mamakhakhe Lesitsi had conducted her research at above-mentioned school based on **Teachers Application of Formative Assessment** during this 2022.

Thanking You in advance.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Matebelo Roelane', written over a dotted line.

Matebelo Roelane (Mrs)  
Principal



MALIBA - MATSO  
High School



25/01/2022

District Education Manager

Hlotse

Leribe 300

Dear Sir

Re: Data collection for master's Degree Research Study

This serves to acknowledge that Miss Mamakhakhe Lesitsi has been granted permission to collect data in our school.

Yours Sincerely

A handwritten signature in blue ink, appearing to be "T. Nyakane", written over a horizontal dotted line.

T. Nyakane (Mr)

Principal

P. O. BOX 727 Leribe 300