An Exploration of the Mathematics Assessment Practices Linked to Poor Learner Performance

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Reference Formats (APA 7th Edition)
Kekana, M. C. (2024). An exploration of the mathematics assessment practices linked to poor learner performance. In M. L. Mokhele-Makgalwa, M. A. Mohale & T. L. Madise (Eds.), *Proceedings of the 40th AEAA Annual Conference on Reimagining Educational Assessment in the Age of Multiple Dimensions of Learning in a Global Society* (pp. 107-121). ERRCD Forum. https://doi.org/10.38140/obp2-2024-08

Abstract: South African learners are performing below the international average across the board. Mathematics has been performing below 60% for years in the NSC. Mpumalanga has been performing below the national average. CAPS provides clear guidelines on assessment practices to be utilised in order to improve learner performance. Additionally, the DBE introduced a framework called MTLF to guide teachers in teaching and assessing effectively in order to improve learning outcomes in Mathematics. Clearly, there are good policies and guidelines in place to improve learner performance in Mathematics; however, learner performance is low. Hence, the importance of conducting this study. The aim of this paper was to explore the assessment practices linked to the poor performance of learners in Mathematics in Mpumalanga Province. The paper answers the question, "What are the assessment practices linked to poor learner performance in Mathematics?" Document analysis and interviews were used as data collection techniques. Mathematics teachers in the sampled schools were interviewed. It was found that the assessment practices as prescribed in the CAPS document were used for compliance. Due diligence was not done in the moderation of scripts; learners were struggling with questions on the application of knowledge, and formative assessment was not adequately given to learners. It was recommended that learners be exposed to adequate formative assessments and that the departmental heads should moderate tasks and scripts closely. Districts should monitor assessment practices in schools. It is concluded that the assessment practices linked to the poor performance of learners were associated with the superficial implementation of the MTLF and CAPS.

Keywords: Assessment practices, MTLF, learner performance, CAPS, formative assessment.

1. Introduction

Literature indicates that from time immemorial learners have complained about the hardship of learning, and teachers have complained about learners who are lazy to practise Mathematics (Alexander, 2016). He argued that some problems in Mathematics are universal; they are not necessarily experienced in a particular country or province. It is the manifestation of these problems in different countries that could make them seem unique; otherwise, they are similar in nature. It has become common knowledge that South African (SA) learners are performing below the international average across the board (Reddy, 2021). Nationally, Mathematics is not performing well, and the picture is not looking better in Mpumalanga province. Tables 1 and 2 depict the 5-year trends nationally and provincially, respectively.

Table 1*: National trends of learner performance in Mathematics over the past 5 years (RSA, 2024).*

Year	**Mathematics pass %**
2023	63,5

2022	55
2021	57,6
2020	53,8
2019	54,6

***Table 2**: Provincial trends of learner performance in Mathematics over the past 5 years (RSA, 2024).*

Year	**Mathematics pass %**
2023	58
2022	52,8
2021	54
2020	50,9
2019	51,6

It is evident from Tables 1 and 2 that learner performance is poor nationally and in the province. It was only in 2023 that learners' performance nationally reached 60% after many years. Mpumalanga is still lagging behind; it has not yet reached the 60% mark, and this is concerning.

1.2 Problem statement

Mathematics is one of the subjects that provide the necessary skills for learners to succeed in other subjects, fields of study and in life. Lamichhane (2018) said Mathematics is a tool that is effective for the development of other human disciplines and has a universal role in all disciplines. It is accepted that there are a myriad of factors impacting learner performance in Mathematics. For example, Msila (2014, p. 344) cited "low educational level of parents, unemployment, abuse and neglect, substance abuse, dangerous neighbourhoods, homelessness, mobility and exposure to inadequate educational experiences" as factors impacting learner performance. Sayac and Veldhuis (2022) mentioned assessment practices as one of the factors impacting learner performance. This study will then explore the assessment practices linked to the poor performance of learners in Mathematics in Mpumalanga Province. The writing of this paper was motivated by poor learner performance in Mathematics amidst the clear policies and guidelines on assessment practices in Mathematics as reflected in CAPS and in the DBE MTLF.

1.2.1 Research Questions

The aim of this paper was to explore the assessment practices associated with poor performance of learners in Mathematics in Mpumalanga Province. The paper addresses the question: What are the assessment practices linked to poor learner performance in Mathematics? To answer this question, literature was reviewed and data was collected from the DBE MTLF, CAPS, and the sampled schools.

2. Literature Review

A literature review was conducted to situate this study within existing ideas related to assessment practices in Mathematics. Assessment practices in the context of this study encompass formal

and informal assessment, assessment design, programme of assessment, marking and moderation of assessment tasks, as well as moderation of learners' scripts. The literature review helped the study understand assessment practices in Mathematics and their impact on learner performance. The DBE framework, known as the Mathematics Teaching and Learning Framework (MTLF), was used as the conceptual framework for this paper and is discussed briefly here.

2.1. Assessment practices in mathematics: An international perspective

Different authors are in agreement that assessment practices in Mathematics impact learner performance. Learners who were exposed to formative assessments were found to be performing better compared to those who never participated prior to the writing of summative assessments (Oyinloye & Imenda, 2019). This finding was in agreement with what Palm, Andersson, Bostrom, and Vingsle (2017), as well as Wafubwa and Csikos (2022), found in their study. They found that there is a positive link between learner performance in Mathematics and formative assessment. Also, Moyosore (2015), who wrote about the effect of formative assessment on students' achievement in secondary school Mathematics, had a similar finding and recommended that teachers should be trained to develop good formative assessment activities.

Daka, Chipindi, and Mwale (2020) conducted a study to establish a relationship between assessment practices and student academic performance. They found that improper assessment practices impacted the academic performance of students. Improper assessment practices mentioned in the study included untimely feedback and feedback that was not properly guiding the students to improve. Clearly, giving learners assessment tasks without marking and providing feedback constitutes bad assessment practice.

There are a number of studies that were conducted pointing out that there is a link between formative assessment and learner performance in Mathematics (Wafubwa & Csikos, 2022; Moyosore, 2015; Palm, Andersson, Bostrom, & Vingsle, 2017). Moyosore (2015), in his study, recommended that teachers should be trained in the development of formative assessment. Training teachers could assist them in developing quality assessment tasks. Quantitative studies conducted are in alignment with the notion that there is a positive correlation between learner performance and formative assessment in Mathematics. Surely, these authors found formative assessment to be a good assessment practice for enhancing learner performance in Mathematics.

Sayac and Veldhuis (2022) conducted a study where they investigated French teachers' assessment practices. These authors explored formal and informal assessment, the design of assessment tasks focusing on cognitive levels, the management of assessment tasks focusing on marking of tasks, moderation of tasks and scripts, as well as providing feedback to learners, as some elements they considered when they explored the assessment practices of Mathematics teachers. They found that in France, assessment practices were still traditional, where the focus

was on summative assessment. There are similarities between the assessment practices of France and South Africa, except that in South Africa other forms of assessment are considered as part of the assessment.

Another study conducted in grades 7–10 in Ontario, Canada, examined the implementation of reform in Mathematics. In this study, the authors found that the assessment practices went beyond ordinary testing of learners. Teachers were observed incorporating self-assessment and some form of quizzes to enhance learning (Suurtamm, Koch & Arden, 2010). Pegg (2003) said assessment is an integral part of teaching and learning and advocated that the new assessment practices should complement the traditional teaching practices of Mathematics. He further argues that assessment in Mathematics is designed such that it is easier to mark as opposed to testing the skills and competencies of learners. Assessment in Mathematics is associated with the identification and appraisal of learners' knowledge, understanding, skills, and performance (Pegg, 2003). The identification and appraisal of learners' knowledge, understanding, skills, and performance could be done by using both formative and summative assessments. Considering Chapter 4 of the CAPS document, one could notice similarities between the South African and Canadian assessment practices.

There are authors who believe that current assessment practices are not in alignment with the use of technology for learning and teaching Mathematics, especially for FET learners. Stacey and Wiliam (2012) argued that a more principled approach to the design of Mathematics assessments can provide a framework for future developments in Mathematics assessment practices. They proposed that assessment in Mathematics should be guided by the mathematical concepts that are most important for learners to learn; enhance the learning and support every learner to learn important concepts and demonstrate this learning (Stacey & Wiliam, 2012). In contrast, the design of an assessment task in South Africa is guided by the weightings of cognitive levels provided in the CAPS document, see Table 3 in this paper (RSA, 2011). The weightings of the cognitive levels were designed for a phase in order to make assessment fair. So, I am of the view that these weightings provide a framework for the development of assessment tasks.

Lamichhane (2018) conducted a study where the assessment practices of countries that are doing well in international assessments like TIMSS were explored. The study focused on assessment practices in Nepal, China, the USA, and Finland. He found that there are two assessment approaches followed in the four countries. Three of the four countries, namely Nepal, China, and the USA, were found to be following the positivist approach, where teaching, learning, and assessment are viewed as isolated. According to the positivist approach, teachers have confidence in using tests for ranking learners' performance, while Finland followed an integral approach to assessment, where assessment is viewed as an integral part of teaching and learning. Different forms of assessment are utilized to determine learners' achievement in Mathematics when using the integral approach (Lamichhane, 2018). Clearly, Finland is in favour of formative

assessment, while the other three countries are confident that summative assessment can be relied upon to determine learner performance.

2.2 Assessment practices in Mathematics: A South African perspective

The South African perspective on assessment practices is outlined in the CAPS document. According to CAPS, "the assessment practices that will improve learning in Mathematics should be such that learners' mathematical knowledge, skills, and understanding of Mathematics are constructed" (RSA, 2011, p. 51). CAPS states that assessment should be both formal and informal to enhance learning experiences in Mathematics. It identifies tests, the June/trial examination, and projects/investigations as formal assessment programmes (RSA, 2011). The design of the formal tasks should cover the content and consist of different assessment types. Moreover, assessment tasks should address various cognitive levels, as shown in Table 3 (RSA, 2011).

***Table 3**: Cognitive levels for FET and GET requirements (RSA, 2011)*

Cognitive levels	FET Weightings in %	GET Weightings in %
Knowledge	20	25
Routine procedure	35	45
Complex procedure	30	20
Problem-solving	15	109

As already indicated, both formal and informal tasks are important in Mathematics. Additionally, tasks are weighted according to grades, and this weighting of tasks guides the assessment practices of teachers in Mathematics (RSA, 2011).

Learners studying Mathematics should be adequately exposed to informal, formative assessment to enable them to practise Mathematics.

2.3 Lessons learnt from international assessment

There are also lessons on assessment practices that can be learned from international assessments. The Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) conducts large-scale cross-national research studies in member countries in Southern and Eastern Africa. SACMEQ achievement results indicate that there is a need to expose learners to examples of applying skills associated with the higher SACMEQ levels in both reading literacy and mathematics (Moloi & Chetty, 2010). This finding from SACMEQ suggests that curriculum planners should design assessments that evaluate learners' application of knowledge acquired. Education planners should consider how to mitigate the challenge of learners performing poorly on questions that require the application of knowledge.

The Department of Basic Education (DBE) is responsible for ensuring that every teacher receives a minimum amount of in-service training (INSET) within a defined period. For example, "every teacher is by law entitled to a defined number of hours of INSET every year" (Moloi & Chetty, 2010, p.12). There is a need to expose learners to examples of applying skills

related to the higher SACMEQ levels in both reading literacy and mathematics. The National Curriculum Statement (NCS) emphasises the importance of teachers designing tasks to ensure that a variety of skills are assessed (Moloi & Chetty, 2010, p.61). The variety of skills to be assessed is outlined in Chapter 4 of all the Curriculum and Assessment Policy Statements (CAPS). The cognitive levels are detailed in the CAPS document (RSA, 2011) and are also included in section 2.2 as Table 3.

As indicated in the introduction, South African learners have been underachieving in mathematics both nationally and internationally. Studies such as the Trends in International Mathematics and Science Study (TIMSS) have shown that South Africa's scores are even lower than those of countries with fewer resources (Reddy, Prinsloo, Visser, Arends, Winnaar, Rodgers, Janse Van Rensburg, Juan, Feza & Mthethwa, 2012). South Africa has a history of poor performance in mathematics. Tables 4 and 5 depict the average scores for grades 9 and 5 obtained in the 2019 TIMSS. Column 1 indicates the country, and column 2 presents the score (standard error (SE)).

***Table 4**: Trends in South African Mathematics Achievement in 2019 grade 9 (Reddy, 2021)*

GRADE 9	
Country	**Score(SE)**
Singapore	616(4)
Chinese Taipei	612(2,7)
Korea	607(2,8)
Japan	594(2,7)
Hong Kong SAR	578(4,1)
Cyprup	501(1,6)
Portugal	500(3,2)
TIMSS Scale Centre point (500)	
Italy	497(2,7)
Turkey	496(4,3)
Kazakhstan	488(3,3)
Oman	411(2,8)
Kuwait	403(5)
Saudi Arabia	394(2,5)
South Africa	389(2,3)
Morocco	388(2,3)

Table 5: Trends in South African Mathematics Achievement in 2019 grade 5 (Reddy, 2021).

GRADE 5	
Country	**Score(SE)**
Singapore	625(3,9)
Hong Kong SAR	602(3,3)
Korea	600(2,2)
Chinese Taipei	599(1,9)
Japan	593(1,8)

Serbia	508(3,2)
Spain	502(2,1)
TIMSS Scale Centre point (500)	
Armenia	498(2,5)
Albania	494(3,4)
New Zealand	487(2,6)
Morocco	383(4,3)
Kuwait	383(4,7)
South Africa	374(3,6)
Pakistan	328(12)
Philippines	297(6,4)

Clearly, South Africa is still at the bottom of the list with regard to performance in international assessment studies. There were interventions put in place by the government to improve learning outcomes in the past. Examples include the Revised National Curriculum Statement (RNCS), the Foundation for Learning Campaign (FLC), CAPS, and the provisioning of workbooks to schools (RSA, 2012). Some of these interventions were specifically directed at improving learner performance in Mathematics. It is acknowledged that these interventions have made an impact on learner performance; however, there is room for further improvement.

2.4 Theoretical framework for the study: DBE MTLF.

The DBE Mathematics Teaching and Learning Framework (MTLF) for South Africa is a document developed by the DBE for teaching mathematics for understanding. It has been developed for South African teachers to guide and assist them in teaching Mathematics in a way that improves learner outcomes. Assessment is integral to teaching and learning. Therefore, improving the quality of teaching and learning in Mathematics using the MTLF will imply improving the assessment practices in Mathematics. The following diagram, Figure 1, depicts the model of the Framework.

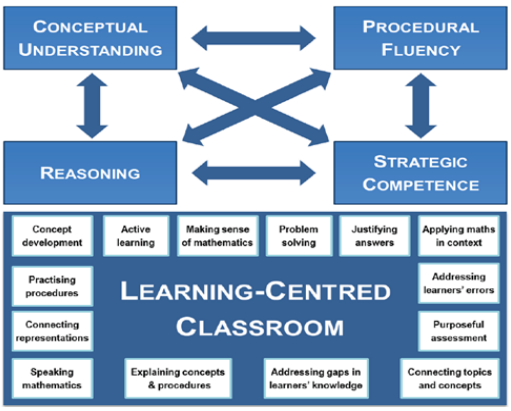

***Figure 1**: Framework model of mathematics teaching and learning (RSA, 2018, p.11).*

The base of this model is about the learning-centred classroom. In the learning-centred classroom, the four dimensions of the model interact with one another, as represented by the

double arrows in the model. It will be the assessment practices of the mathematics teacher that will enhance active learning, making sense of mathematics, problem-solving, justifying answers, and all the elements listed in the base of the model possible.

3. Methodology

This was an interpretive study aimed at understanding the assessment practices associated with poor learner performance in Mathematics as a phenomenon (Maree, 2007). A purposive sample was drawn from the Mathematics, Science and Technology Academy (MSTA) schools within the Mpumalanga Department of Education. The sample for the study was sourced from a population of 101 MSTA schools.. Two grades were targeted namely, grades 9 and 12. A set of six learners' scripts and workbooks was requested from the sampled schools. Two from high performers, two from middle, and the last two from low-performing learners. Document analysis was done using the CAPS documents for the Senior and FET phases in order to check the assessment practices as prescribed in the Curriculum and Assessment Policy Statement (CAPS).

Mathematics teachers were interviewed on the link between assessment practices and learner performance. The interviews were semi-structured, and responses were captured. In addition, for triangulation of data purposes, lead teachers for Mathematics were given a list of semi-structured questions to investigate what they think are the assessment practices linked to the poor performance of learners in Mathematics. The lead teachers were attending the MSTA training, and this was a convenient sample. There were 26 lead teachers in attendance, and eight were conveniently sampled to respond to the interview questions. These were the lead teachers responsible for Mathematics in the MSTA schools. Four of the eight were General Education and Training band (GET) lead teachers, and the other four were Further Education and Training band (FET) lead teachers.

The sampled schools, lead teachers, and teachers involved in the study were formally informed about the purpose of the study. They were told that participation in the study was voluntary and that they could withdraw at any time without any penalty if they wished (Bless, Higson-Smith and Sithole, 2013). They were informed that their names and those of their schools would not be mentioned in the paper for confidentiality purposes. However, findings and recommendations would be shared with them so that they were appraised on the assessment practices linked to poor learner performance in Mathematics.

4. Presentation of Results

As already indicated, the aim of this paper was to explore the assessment practices linked to the poor performance of learners in Mathematics in Mpumalanga Province. The findings that emerged from the study are discussed in this section. It was found that the assessment practices used in the sampled schools are in line with those prescribed in the CAPS document. For

example, learners were exposed to different forms of assessment, the programme of assessment was followed, each assessment task comprised different cognitive levels, departmental heads moderated the tasks before they were written, and they moderated scripts after marking had been concluded. However, due diligence was not exercised when moderating the learners' scripts. I concluded that these assessment practices are followed for compliance purposes; see Figures 2 and 4, where the departmental head moderated the script in a different colour pen.

It was also found that there is little informal assessment in the learners' workbooks, and the few items that were found were recall-type assessment items. Some learners' workbooks contained classwork that was not marked. I concluded that formative assessment is not viewed as important by some teachers. Consequently, learners might not receive feedback or corrections to learn from if formative assessment is not marked. It was learned from the literature review that learners become demotivated when they do not receive feedback on time (Daka, Chipindi & Mwale, 2020). A number of authors agree that there is a correlation between formative assessment and learner performance (Wafubwa & Csikos, 2022; Moyosore, 2015; Palm, Andersson, Bostron & Vingsle, 2017). Linked to this finding was the observation that learners lack strategic competence to deal with multiple-choice questions (MCQs). Learners write examinations underprepared, and they have adopted the habit of writing and cancelling, which consumes their time to finish tests or examinations. This indicates that formative assessment is not sufficiently conducted. Therefore, formative assessment, as found in the literature, is an important part of the assessment practice in Mathematics.

Learners performed poorly on questions that required the application of knowledge. For example, they struggled with the application of theorems to solve riders in Euclidean geometry, simplifying expressions containing fractions, and using formulae to perform calculations. Figures 1 and 2 are examples indicating that learners are struggling with activities that necessitate the use of theorems and rules of Mathematics to solve problems. There is still much research that can be done in the area of applying mathematical knowledge to solve problems. In addition, the analysis revealed that English as the Language of Learning and Teaching (LoLT) poses a challenge; learners struggled with word problems in related assessment questions.

5. Discussion of Findings

As already indicated, the aim of this paper was to explore the assessment practices linked to poor performance of learners in Mathematics in Mpumalanga Province. The study attempted to respond to the question, "What are the assessment practices linked to poor learner performance in Mathematics?" The summary findings and detailed findings will be discussed in this section.

5.1 Summary findings

The study found that the assessment practices prescribed in the CAPS document were primarily used for compliance. Due diligence was not exercised in the moderation of scripts, and learners

struggled with questions requiring the application of knowledge. Additionally, formative assessment was not adequately provided to learners. Furthermore, learners performed poorly in multiple-choice questions and word problems.

5.2 Detail discussion of the findings

Data collected was organized and analysed under five themes namely, teaching mathematics for conceptual understanding, developing procedural fluency in learners, learners' strategic competence, opportunities for learners to develop mathematical reasoning skills, and challenges in mathematics teaching. These themes were taken from the DBE MTLF (RSA, 2018), which was used as a theoretical framework for this study. The last theme, which is challenges, emerged from the data collected.

5.2.1 Teach mathematics for conceptual understanding

Though assessment practices in terms of exposing learners to different types of assessment were evident in the assessment tasks, learners are still struggling with questions where they needed to apply knowledge, probably because mathematics was not taught for conceptual understanding. Figure 2 depicts an example of learners' scripts who did not even attempt the questions requiring the application of theorems learned.

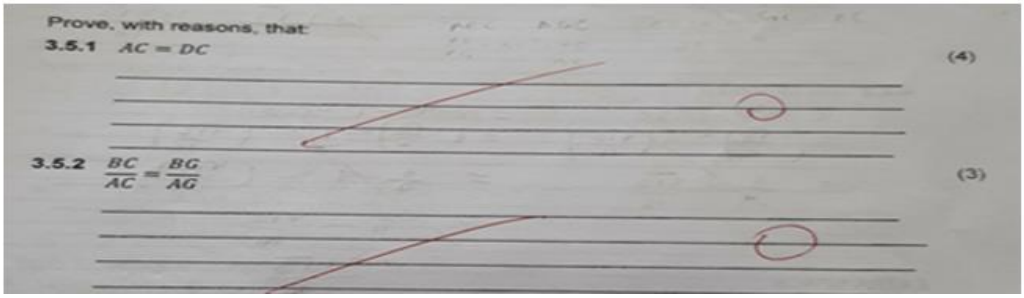

***Figure 2**: Image depicting a learner who did not attempt the problem*

5.2.2 Develop procedural fluency in learners

Learners should be taught procedure in problem solving (RSA, 2018). Data analysis revealed that some learners lack procedural fluency in solving the mathematical problems.

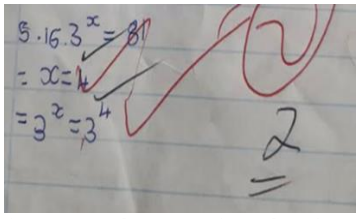

***Figure 3**: Image depicting a learner who solve the problem haphazardly*

For example, some steps were mixed up when solving problems. Presumably, learners are not following the rules and procedures of mathematics when solving problems. Clearly, teachers do not emphasise the importance of rules and procedures in problem-solving in mathematics.

Hence, this learner was awarded full marks and, in my view, the teacher is not so concerned about procedure when assessing problem-solving. Figure 3 indicates that the departmental head moderated and agreed that this learner was to be awarded full marks.

5.2.3 Learners' strategic competence

It was found from data analysis that learners have a habit of writing and erasing. Mathematics is a "doing" subject where learners should practise to acquire strategic competence. This will require assessment practices that focus on formative assessment, allowing learners to gain confidence from small victories in sections of the curriculum. Writing and erasing was found to waste a significant amount of the learners' time during tests and examinations. Some learners write entire questions in pencil, and data analysis revealed that not all learners were able to erase the pencil marks. Clearly, the act of writing and erasing or cancelling was linked to learners' lack of strategic competence when solving problems. Writing and deleting could also be associated with a lack of confidence in what they are writing. I concluded from this that learners approach tests and examinations without adequate practice. Literature points out that learners' challenges in mathematics are linked to insufficient time spent on the content taught (Pegg, 2003). Pegg (2003) found in his study that teachers acknowledged that some learners were underperforming because they were not given sufficient time to engage with the content taught. Formative assessment plays a crucial role in preparing learners for summative assessment, as found in the literature. Figure 4 shows examples where learners displayed a lack of confidence that results from inadequate exposure to formative assessment.

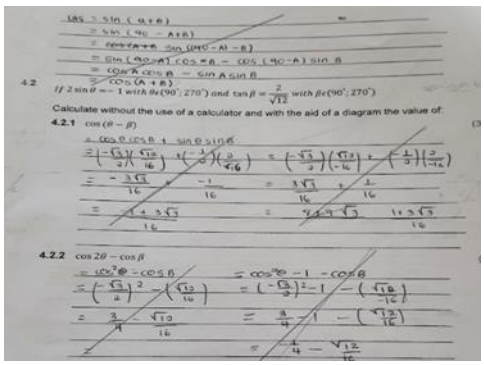

Figure 4*: Image depicting portion of scripts where learners were writing and erasing*

Learners do not have strategies for writing tests and examinations. Also, they performed badly in multiple-choice questions (MCQs), probably because they lack strategic competence; they lack a strategy to deal with MCQs. I concluded from this that learners lack a strategy to answer MCQs. Assessment practices in mathematics should be such that these challenges are addressed.

5.2.4 Mathematics reasoning

Learners were also found to be struggling with word problems in the different phases, namely, GET and FET phases. Data analysis revealed that translating an English sentence into a

mathematical expression was poorly performed, as seen in Figure 5. Some learners did not know where to start, and they resorted to leaving blanks.

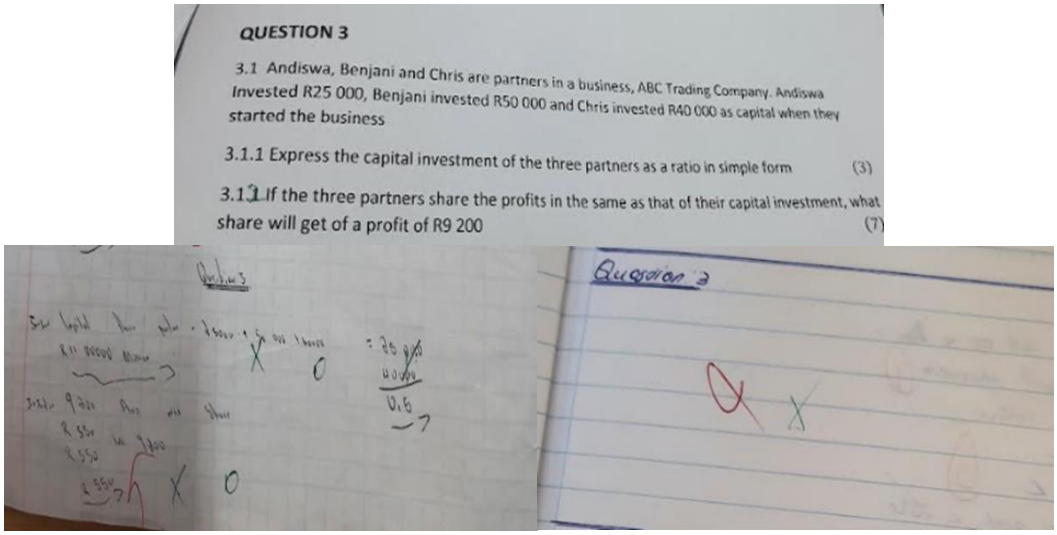

***Figure 5**: Image depicting poor performance of learners in word problems*

I concluded that the assessment practices in Mathematics classrooms are not promoting the implementation of English across the curriculum in schools.

5.2.5 Challenges in Mathematics teaching linked to assessment practice

It was found from the analysis of the scripts that some teachers are not well grounded in teaching Mathematics. It is evident from the figure that the teacher is also struggling with the Mathematics content. Some questions in learners' scripts were not fully marked, as seen in Figure 6. This is in alignment with the findings of other studies. Also, the departmental heads are not performing due diligence when moderating learners' scripts.

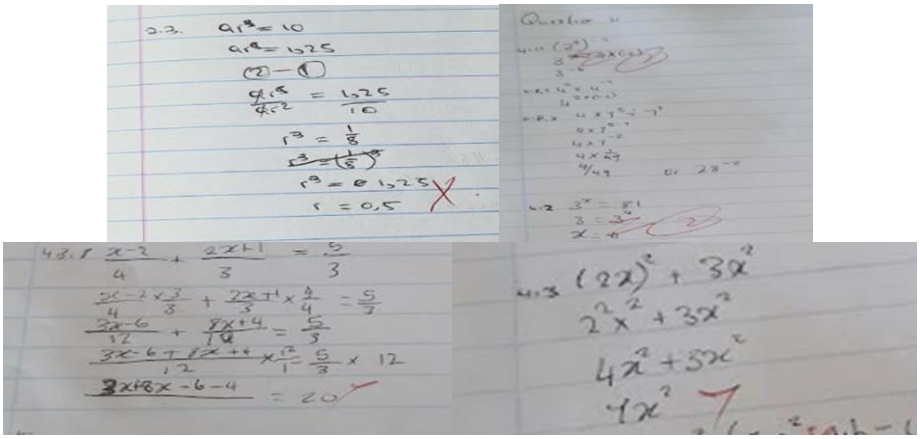

***Figure 6**: Image depicting scripts where teachers did not do due diligence when marking*

They do not award marks for correct steps. Some do not mark all the questions in the learners' books; see Figure 7 below. Sometimes, some teachers mark correct answers as wrong. Learners

could be demotivated by all these assessment practices. This finding is in alignment with what Lamichhane (2018) stated, that learners are demotivated to do Mathematics in higher grades because of being discouraged by failing the subject. Learners might not learn from destructive feedback like the one depicted in Figure 8.

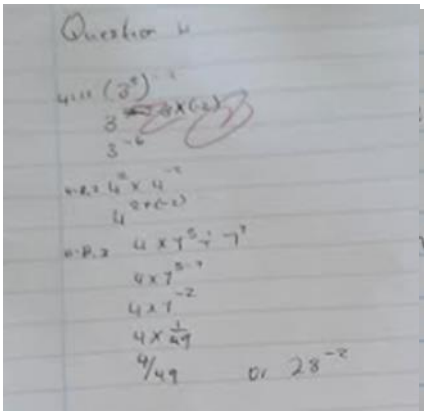

***Figure 7**: Unmarked question*

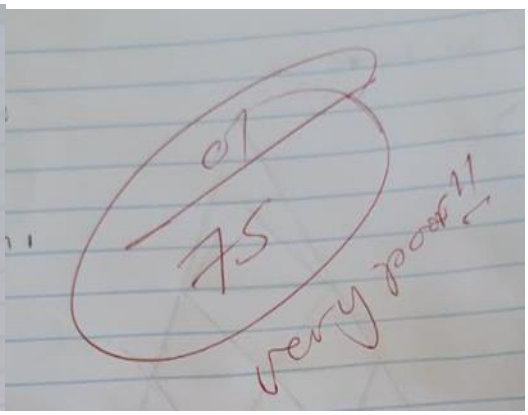

***Figure 8**: Destructive comments*

6. Conclusions and Recommendations

Assessment practices in Mathematics should be designed to assess what learners know and understand. Therefore, teachers should guard against demotivating learners by minimising inaccuracies in the marking of scripts. The aim of this paper was to explore the assessment practices linked to the poor performance of learners in Mathematics in Mpumalanga Province. The study identified several assessment practices associated with this poor performance, including a lack of due diligence when moderating learners' scripts, an inability to train learners to answer questions that require the application of knowledge learned, inadequate exposure to formative assessment, and exposing learners to different forms of assessment superficially, merely for compliance. These assessment practices led learners to display a lack of confidence in their answers, often resulting in writing and erasing.

The paper provides recommendations aimed at mitigating the identified challenges. Policymakers are urged to consider these recommendations. Consequently, schools should implement the recommendations to improve assessment practices in Mathematics. Teacher training on assessment practices in Mathematics is necessary. The McKinsey and Company report argued that the quality of any education system cannot exceed the quality of its teachers (Barber, Mourshed & Whelan, 2007). Therefore, teachers are change agents in influencing the assessment practices that will enhance learner performance.

It is recommended that further studies be conducted in the area of assessment practices and learner performance in Mathematics. Future studies can focus on assessment practices linked to good learner performance. This paper recommends that teachers be trained to set questions requiring the application of knowledge learned, that districts develop an assessment item bank

and distribute it to schools for formative assessments. These assessment items should comprise different cognitive levels to ensure fairness. Departmental Heads in schools should monitor the use of these items in formative assessments; the Departmental Heads of Mathematics should be trained in the moderation of tasks before they are administered and in the moderation of scripts after marking has concluded; teachers should be trained in solving word problems, and the implementation of English across the curriculum should be monitored; finally, the utilisation of the DBE MTLF should be overseen to improve theassessment practices of teachers.

6.1 Limitations of the study

As indicated, the study adopted a qualitative method approach to research that involved purposeful sampling. The purposive sampling might not allow for the generalisation of the findings; however, transferability will be possible in this study because data was collected until a saturation point was reached. Also, data collection targeted schools from lower quintiles that face challenges related to resources and some teachers who are not adequately trained. Therefore, the findings may not be transferable to high quintile schools.

7. Declarations

Funding: This research did not receive any external funding.

Acknowledgements: A word of appreciation goes to the schools that data to be collected from their schools.

Conflicts of Interest: I declare that there is no conflict of interest.

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