

**LEARNER PERCEPTIONS ON FEEDBACK RECEIVED ON PERFORMANCE
TASKS IN MATHEMATICS IN SELECTED SCHOOLS FROM THE EAST LONDON
DISTRICT IN THE EASTERN CAPE**

A research proposal in fulfilment of the requirements for the degree of

MASTERS IN EDUCATION

UNIVERSITY OF FORT HARE

by

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DECLARATION

I declare that this thesis for the M.Ed. degree is my own work and has not been previously submitted at any university. This work has been done under the professional guidance of a Fort Hare University supervisor whose name appears on the title page. Views that have been extracted from both published and unpublished experts have been acknowledged and listed in the list of references.

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Nozuko Gloria Ngudle

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DATE

ABSTRACT

Feedback has an important role to play in the performance of learners. This study looks to identify the challenges that the learners are faced with when the teachers provide them with feedback and the ways they would like it to be used in order to see feedback assisting them in their learning and improve their performance. Feedback contributes a lot to assessment and has a close link with performance.

The study used the qualitative approach to identify the challenges the learners experience when they receive the feedback from their teachers. The participants were sampled from grade 12 learners in the form of a focus group (seven to ten per school) and individual respondents. The m

ethod used semi-structured interviews and portfolio observations to collect the data from two high schools in East London (EL) district to look at the nature of the feedback provided to learners. The data was later analysed and interpreted.

It has been identified that for both schools feedback conveyed certain messages to learners such motivation to do better, a need to do better and, lastly, affirmation that the learners are on the right track or they are neglected and left to figure out how to do the tasks. The study discovered that, according to Hattie and Timperley (2007)' there are four levels of feedback. It was found that for the task level learners from school A mainly received oral feedback which was often seen as denigrating them; however, in school B learners received both the oral and written feedback. They felt that the feedback assisted them to understand the task at hand. They also saw this as a way of building up their confidence in all the tasks they come across. Secondly, in the process level, learners in school A did not report receiving feedback at this level but only oral feedback which does not show their mistakes step by step in the task, yet in school B they reported that they got feedback from their teacher individually to help them understand the task. Thirdly, for the self regulation level, in school A there was no data to confirm this. Regarding school B, learners were being assisted by the feedback they received from their teacher and this caused them to monitor their progress. The fourth and last level is the self or personal evaluation where in school A learners were not able to evaluate themselves because they did

not receive written feedback, whereas in school B learners could do that freely referring to the written comments from their teacher.

The research therefore concluded that in one of the schools the four levels that the study was looking at were not all addressed and thus no meaningful feedback was given. For school B the teacher gave them the feedback which has contributed a lot in their learning.

The study recommends that feedback should not be used for right or wrong answers but it must also state clearly why the learner has obtained such mark or grade and what to do to correct the wrongs. Teachers should consider that learner errors also assist them to have a broader picture on what more they need to do in their subjects. It is also recommended that teachers should consider various strategies in giving feedback and the learners' work has to be monitored timeously for the purpose of the learning process. Lastly, a good approach when feedback is provided is also important because it builds high self-esteem and develops the teacher-learner approach accordingly.

KEY WORDS: feedback, assessment, performance, models of feedback, oral feedback, written feedback.

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Lastly, I want to thank my family and friends who gave me power and strength and have been supporting me throughout tirelessly.

DEDICATION

I dedicate this work to the teachers and learners of all of South Africa, especially those in the Eastern Cape and all who are interested to see performance in mathematics improving.

It is dedicated, too, to my mother, my late father, my husband and children, who allowed me to take start and finish this study without complaining.

It is also dedicated to all my cousins and friends who gave full support all the time during the time of this study.

ACRONYMNS

CASS	Continuous Assessment
CL	Collaborative Learning
DFC	Dialogic Feedback Cycle
DoE	Department of Education
DRE	Delay-Retention Effect
EL	East London
FAL	First Additional Language
FET	Further Education and Training
FIT	Feedback Intervention Theory
HoD	Head of Division
LOLT	Language of Teaching and Learning
ML	Mathematical Literacy
SDT	Self Determination Theory
UFH	University of Fort Hare
US	United States

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CHAPTER 1

INTRODUCTION AND BACKGROUND TO THE STUDY

1.0 INTRODUCTION

It has been argued that the feedback that educators give to their students after assessing their work is one of the most powerful tools for improving performance. In giving feedback teachers have a challenge that they have to understand the unique needs of each and every learner in the classroom and how much time they have to spend when giving the feedback. Ackerman and Gross (2010) argue that feedback is often quite individualized in response to students' individual work and is a way for instructors to communicate expectations with regard to the objectives of the course.

1.2. UNDERSTANDING THE ROLE OF FEEDBACK ON PERFORMANCE

Hattie and Timperley (2007: 81) defined feedback as “...*information provided by an agent (e.g. teacher, peer, book, parent, self, experience) regarding aspects of one's performance or understanding...*” Such feedback can be written or verbal, as long it gives information on what the learner has done. The authors talk of ‘the power of feedback’ and argue that feedback is one of the most powerful influences on learning and achievement and can have either positive or negative effects. In a similar vein Shute (2008) argues that feedback must be formative, which means it must be continuous information provided during the course of teaching and learning. Such information communicated to the learner is intended to modify his or her thinking or behaviour for the purpose of improving learning. According to Cohen (1985: 33) feedback “...*is one of the more instructionally powerful and least understood features in instructional design...*” Winne and Butler (1994: 574) provided an excellent summary in their claim that:

...feedback is information with which a learner can confirm, add to, overwrite, tune, or restructure information in memory, whether that information is domain knowledge, meta-cognitive knowledge, beliefs about self and tasks, or cognitive tactics and strategies...

It is argued by Hattie and Temperley (2007) that effective feedback answers three related questions which are: *Where am I going? How am I going? Where to next?* These questions, however, depend on the level at which the feedback operates in order to reduce the gap between potential and performance. The levels are shown in Figure 1 below.

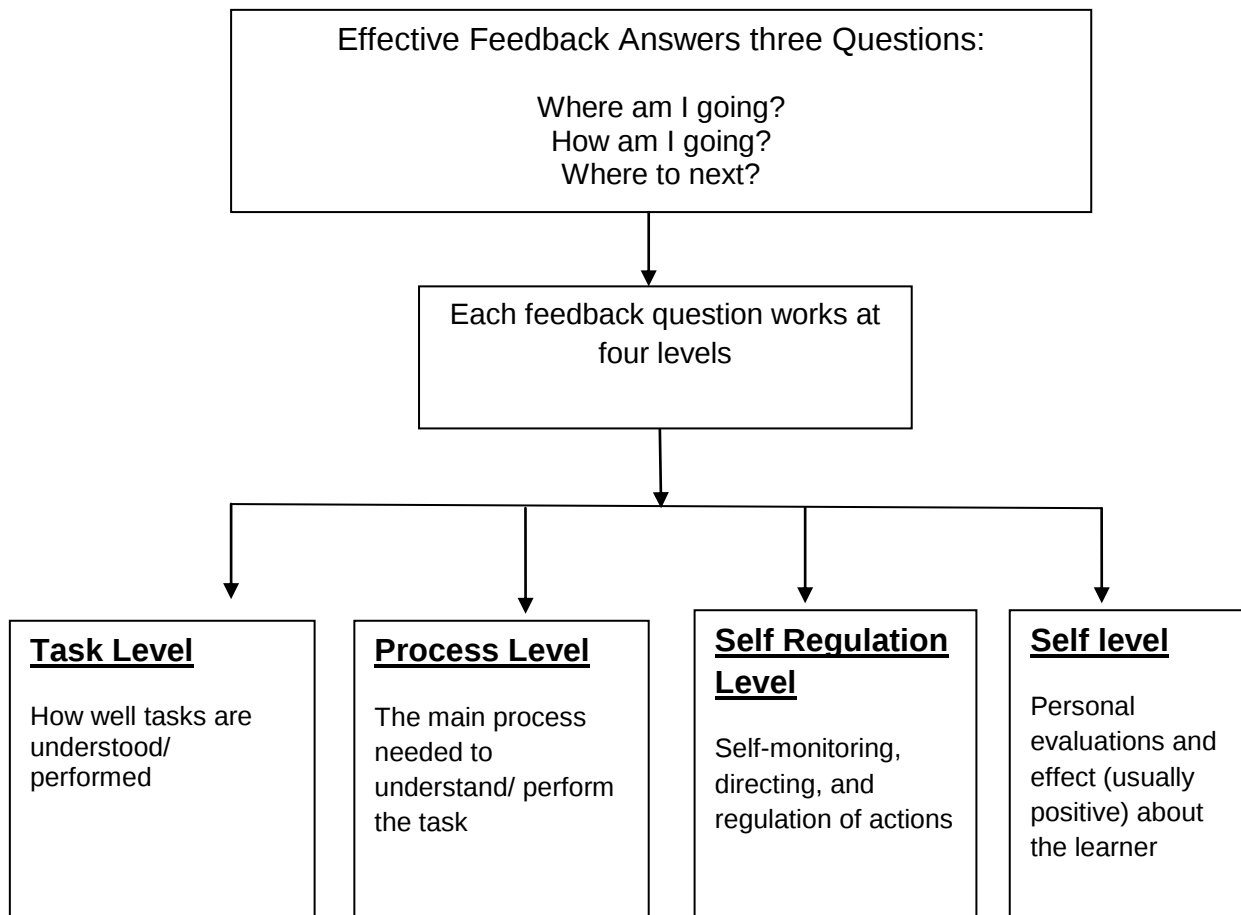


Figure 1: A model of feedback to enhance learning (Adapted from Hattie and Timperly, 2007)

It can be seen from Figure 1 above that feedback at Task Level includes distinguishing correct from incorrect answers which include the directions as to what needs to be added to the given answer. Process level, relates to the construction of meaning, that is, understanding or the cognitive processes which may lead to students' processes of error detection leading to completion of the task given. The level of Self Regulation is about the learner being committed and engaged in greater skill in self-evaluation and to gain confidence and more power in continuing with the task and working towards the set goals. Finally, the Self level is directed to a person

and is regarded as least important when related to the task because it is about the praise only.

1.3 FEEDBACK AND LEARNER PERFORMANCE

In most cases teachers mark the learners' work and make constructive comments. Yorke (2003) concurs with this by saying, "feedback is defined as critical information students receive from instructors regarding assignments and exams." This feedback can help students to understand the basis for their earned or likely grades and provide information to help them improve on future assignments. Its purpose is to contribute to student learning through the provision of information about performance. The learners have a role to play by ensuring that they utilize the given comments in their work. Hounsell (2003) argues that feedback plays a decisive role in learning and development and that students learn faster and more effectively when provided with a clear sense of how well they are doing and what they can do to improve. Hyland (2000) has found out that 90% of students believe that feedback from instructors can help them identify their strengths and weaknesses and improve their future work. Ackerman and Gross (2010) are of the view that feedback frequently takes the form of qualitative comments and suggestions written on assignments and exams and allows students to better understand their individual progress toward course objectives. These researchers have a concern as to whether the students react positively to feedback and, if so, is there such a thing as too much? Do they value the feedback they receive from instructors? How does the feedback impact students' perceptions of the instructor and the assignment?

It is up to the learners to take the comments seriously or ignore them. According to Ashford and Cummings (1983), in the seminar they held it was suggested that feedback recipients play an active role in the feedback process. In this more active role, feedback recipients shape their feedback environments by seeking feedback, generating their own feedback, processing information, and combining information from multiple sources. Guénette (2007: 52) emphasises the crucial role of individual learner differences such as motivation. She claims that "If the students are not committed to improving their writing skills, they will not improve, no matter what type of corrective feedback is provided." This suggests that feedback recipients differ in how they respond to and use feedback.

1.4 MOTIVATION FOR THE STUDY

If feedback is important for learner performance, it is important that learner perceptions on how it is given and what they do with messages they get from it are discovered and interrogated. Many researchers put emphasis on feedback saying that it should be descriptive and talk to the individual learner to address the errors for the purpose of learning and the improvement of their performance. It is for this reason that I carried out this study designed to give voice to learners, the recipients of feedback. Information generated can be used to improve the way educators give feedback and, ultimately, lead to enhanced learning and performance in assessment tasks.

1.5 STATEMENT OF THE RESEARCH PROBLEM

Despite all the research cited above, there is not much said by and about the learners concerning how feedback helps or does not help them perform better. Not much qualitative research on how learners learn as a result of the feedback they receive from educators has been conducted in South Africa. Tata (2002) has argued that feedback sometimes improves at other times it decreases performance. It is, therefore, important to seek empirical evidence on how learners react to feedback. This should cast some light on circumstances when feedback enhances learner performance and when it does not.

1.5.1 Main research question

What perceptions are held by learners regarding feedback received on tasks in mathematics?

1.5.2 Sub-research questions

- 1.5.2.1** What types of feedback do learners receive on performance tasks?
- 1.5.2.2** What levels of feedback are reflected from the learner perceptions?
- 1.5.2.3** What messages do learners get from feedback about (a) their performance and (b) their relationship with the teacher?

1.6 PURPOSE OF THE STUDY

The purpose of the study is to investigate learner perceptions on feedback given to them by their educators in selected schools in the East London district in the Eastern Cape.

1.7 SIGNIFICANCE OF THE STUDY

Feedback as explained by researchers (Hattie and Timperley, 2007; Shute, 2008) is part and parcel of the learning process which may influence learning either negatively or positively. The impact of feedback can be accessed through the recipients' reactions to feedback. In schools the recipients are learners. With such knowledge, the teachers will be able to prepare and facilitate the lesson for every learner after each and every task given to the learners. It will also assist teachers to be clear about how they should conduct feedback to their learners.

1.8 DEFINITION OF TERMS

Performance: Carroll and Schneier (1982) defined performance in terms of task-oriented behaviours.

Feedback: Feedback is defined by Ackerman and Gross (2010: 2) as "critical information students receive from instructors regarding assignments and exams".

1.9 LITERATURE REVIEW

Literature review will explore the theoretical frameworks which explain the psychology behind the reactions to feedback and how these reactions relate to learner performance. Achievement Goal Theory (Pintich, 2002) and Self-determination (Ryan and Deci, 2000) theories will be explored. Alongside these theories the following themes will be reviewed: *Formative feedback* (Schute, 2008); *Models of feedback that enhance learning* (Hattie and Timperly, 2007); Narciss and Huth, 2004). Also the *Feedback Outcome* will be of use (Levy and Williams, 1998), as will perceptions of task and *non-task feedback* (Hempel: 2008)

It is believed that feedback and goals are mostly important in the teaching and learning fraternity because they affect performance in a context where knowledge alone does not work at all. A learner is a primary recipient of any type of feedback. According to Locke and Brian (1968), goals and intentions mediate the effect of feedback and performance. In order to know whether you have reached the set goals, some form of feedback is necessary. Hattie and Timperley (2007) see it as a consequence of performance. To take on this instructional purpose, feedback needs to provide information specifically relating to the task or process of learning that fills a gap between what is understood and what is aimed to be understood (Sadler, 1989), and it can do this in a number of different ways such as increased effort, motivation, or engagement. Feedback becomes most powerful when it addresses faulty interpretation rather than the total lack of understanding. Kulhavy (1977) demonstrated that feedback is not necessarily a re-enforcer because feedback can be accepted, modified, or rejected.

1.10 METHODOLOGY

The study used the interpretive paradigm which is informed by the qualitative approach for the purpose of interrogating the learners on the feedback they receive from their teachers and how they use it to improve their performance in mathematics. In the study two schools were used as case studies for the research. Though the schools are performing well according to the overall results, the criteria for choosing the schools were based on the quality of the performance in mathematics.

The data was collected using a semi structured set of interviews and the data was then analysed. The validation of the data was strengthened by the observation of the learner portfolios and official documents which acted as the secondary data in the study.

The analysis of the data was informed by the learner perceptions on feedback they received from their teachers and guided by the themes driven from the three feedback questions and the four levels of Hattie and Timperley (2007). In chapter 3 a more detailed discussion is provided of the methodology approach used in this study.

1.11CHAPTER DEMARCATION

Chapter 1: Introduction and background

Chapter 2: Review of literature

Chapter 3: Research methodology

Chapter 4: Data presentation and analysis

Chapter 5: Summary, conclusions and recommendations

CHAPTER 2

LITERATURE REVIEW

2.0. INTRODUCTION

The purpose of this chapter is to review literature related to learner perceptions on feedback received on performance within the South African context and the developed countries. The motive behind it is to turn the educator's attention to how to provide the learners with a better understanding of what is required of them, to find out what the learners say about the feedback they receive from them, and when and how feedback should be given, including how important it is to give feedback.

2.1. UNDERSTANDING THE CONCEPT OF "FEEDBACK"

According to Hattie and Timperley (2007, p. 81) feedback has been defined as the information provided by an agent (e.g. teacher, peer, book, parent, self, experience) regarding aspects of one's performance or understanding. Feedback has been widely cited as an important facilitator of learning and performance and feedback can provide information that may be useful for correcting inappropriate task strategies, procedural errors, or misconceptions (Shute, 2008, p. 157).

Hounsell (2003, p. 67) argues that "it has long been recognised, by researchers and practitioners alike, that feedback plays a decisive role in learning and development, within and beyond formal educational settings." Hattie and Timperley (2007, p. 83, cited in Winne and Butler, 1994, p. 574) provided an excellent summary in their claim that "feedback is information with which a learner can confirm, add to, overwrite, tune, or restructure information in memory, whether that information is domain knowledge, meta-cognitive knowledge, beliefs about self and tasks, or cognitive tactics and strategies." On the other hand, Wiggins (1998, p. 46) explained it as the "information about how a person did in light of what he or she attempted." Feedback is an essential component in all learning contexts and serves a variety of purposes including evaluation of students' achievements, development of students' competences and understanding, and elevation of students' motivation and

confidence (Hyland, 2000). Additionally, Laurillard (1993, p. 61) states that all learning involves feedback and that “action without feedback is completely unproductive for the learner.”

Feedback in the opinion of Getzlaf et al. (2009) is defined as information provided from instructors to students about course activities in which students were engaged, including written assignments, conference postings and course interactions, whilst other writers relate it to the objectives of the exercise done. Torrance and Pryor (1998, p. 8) agree with this by saying “feedback tells the learners how well they have achieved particular objectives at a particular point in time and what else they might need to do in order to improve.” In other words this means that the role of the teacher is to identify where and how far the learner has travelled towards the learning goals, where they may have gone off track and what further learning may be required to make sure that there is improvement. On a different note, Hattie and Timperley (2007, p. 85) collaborate this view by reporting that feedback is more effective when it provides information on correct rather than incorrect responses and when it builds on changes from previous trials.

In addition, Hattie (2002a, p.6) asserts that feedback is only effective to the degree that it directs students to reconsider the task and causes them to revisit the task and, in this way, enhances self-efficacy by helping the student recognize ways to self-assess and improve. A very similar view about feedback is stated by Ifenthal (2010) who considers feedback a fundamental component for supporting and regulating learning processes. In order to be effective, feedback on formative assessment needs to possess a number of qualities: it needs to be timely, constructive, motivational, personal, manageable and directly related to assessment criteria and learning outcomes (Race, 2006; Irons, 2008; Juwah et al, 2004; Race, 2001; Brown 2001, p. 17). Race (2001, p. 87) suggests that in order for the assessment feedback to be more effective it needs to be personalized so that it fits each student's individual and personal educational needs. Additionally, Ramaprasad (1983, p.4) cited in Sadler. (1989, p. 120) is of the view that feedback is designed in terms of its effect rather than its informational content and therefore defined as “information about the gap between the actual level and referenced level of a system parameter which is used to alter the gap in some way”.

Other than the opinions given above on feedback, there are various researchers who also have a common view about what feedback means to them. An example of these researchers is Colen (1985) and Sales (1993), they defined feedback as any communication or procedure given to inform a learner of the accuracy of a response, usually to some type of instructional question. In addition, Wiggins (1998, p.46) has a view on feedback as “ information about how a person did in the light of what he or she attempted.” Nicol and Macfarlane-Dick (200, p. 7) understand feedback as information about how the student’s present state (of learning and performance) relates to set goals and standards of the task and they further say it is anything that might strengthen the students' capacity to self-regulate their own performances.

In addition to what they say, they also talk of good feedback practice which might strengthen the students’ capacity to self-regulate their own performance that led to seven principles, which are as follows:

- (1) helps clarify what good performance is;
- (2) facilitates the development of self-assessment (reflection) in learning;
- (3) delivers high quality information to students about their learning;
- (4) encourage teacher and peer dialogue around learning;
- (5) encourage positive motivational beliefs and self-esteem;
- (6) provides opportunities to close the gap between current and desired performance;
- (7) provides information to teachers that can be used to help shape the teaching.

However, Slavin (2003, p. 353) sees feedback as "information on results of one's efforts". This, therefore, means that feedback helps learners to maximise their potential at different stages of learning, raise their awareness of strengths and areas for improvement, and identify actions to be taken to improve performance. Additionally, the opinion of (Ifenthaler, 2009; Ifenthaler & Seel, 2005) is that, feedback plays a particularly important role in highly self-regulated, model-centred learning environments because it facilitates the development of mental models, thus improving expertise and expert performance

According to Rowe and Wood (2008, p. 79) cited in Rucker & Thomson (2003) in their research they identified several constructs involved in the feedback process: the sources of feedback (teachers and students); the mode of feedback (how it is presented); the content (information conveyed); and the occasion (when it is presented). In the document of Mory (2004: p. 777) feedback is analysed and the suggestion made that feedback is a "critical function in knowledge acquisition" and that without a feedback mechanism learning would not occur. Wagner & Wagner (1985) perceive it as any type of information provided to learners. Despite its importance, however, research suggests that in order to be effective, feedback on formative assessment needs to possess a number of qualities: it needs to be timely, constructive, motivational, personal, manageable and directly related to assessment criteria and learning outcomes (Race, 2006; Irons, 2008; Juwah et al, 2004; Race, 2001). On a different note Archer (2010, p.101) maintains that effective feedback is the feedback in which information about previous performance is used to promote positive and desirable development.

Feedback has been defined by many authors in different ways though they have almost the same meaning. McCann & Saunders see feedback as an essential part of assessment and is a key factor in underpinning successful teaching and learning strategies. Feedback included objectivist, product-oriented information (for example, comments provided following evaluation of written assignments) and constructivist, process-oriented information (for example, suggestions to improve the content of online conference postings) (Hummel, 2006). Similarly, Hattie & Timperley (2007, p. 81) defined feedback as the consequence of performance. Consequently, learning may be viewed as "unproductive for a learner" (Laurillard, cited in Young, 2000, p. 409) in the absence of feedback. Rowntree (1987, p. 24) indicates how vital feedback is to learning in stating that feedback "is the life-blood of learning". With the above discussions on the various meanings of feedback which varies in different contexts, to reach the intended goal, this research study is in favour of Hattie and Timperley because they have come up with a clear model which explains why particular kinds of feedback promote learning effectively and why some others do not. Their study has gone as far as to identify the conditions that maximize the positive effects on learning.

To conclude, this means that if the learners are not provided with feedback, they will assume that all they have done is correct and therefore there is no need for improvement which is a false assessment by the learner of their own abilities. This is supported by Brown (2007, p. 17) with the view that students are ill-equipped to respond effectively to feedback and, as such, it is necessary to teach students how to make use of assessment feedback.

2.2. DIFFERENT TYPES OF FEEDBACK

There are different types of feedback, such as oral and written feedback, which are further sub-divided into self-efficacy, teacher-student conferences, and attributional which are further explained to have a better understanding to what they mean. In all schools learners have differences in terms of culture with different socio-economic status and different personalities that have to be catered for. Gager and Berliner talk about self-efficacy which is lowered when students' performances are compared with others and, therefore, they recommend that teachers should highlight progress rather than deficiency. In the teacher-student conference that Gager & Berliner talk about, which promotes student-guided motivation, the teacher is able to determine what kind of person each student is and is then able to identify the type feedback the student needs.

Motivational feedback may have a positive or a negative effect on student motivation and self-esteem. It affects students' personal feelings which, in turn, affect their engagement in the learning process (Juwah et al, 2004). As a result, formative feedback should be empowering and constructive in order to aid student motivation and encouragement. Nicol and Macfarlane-Dick (2006, p. 201) concur with this by referring to research studies that say research shows that feedback both regulates and is regulated by motivational beliefs.

In addition, Fredenburg, Lee and Solmon (2002) have a view of ability feedback with an indication that students determine their ability to perform a particular task through their cognitive appraisal of available information, including sources such as feedback provided by teachers or significant others. Watty cited in Sadler (1989) defined three

conditions necessary for students to gain real value from feedback: (1) Students need to be aware of the standard or the expected level of achievement necessary to secure a particular grade in the subject; (2) Students require feedback that provides them with a clear understanding of their current level of performance (on a specific assessment task, for example); and, (3) Quality feedback provides students with a road map to follow that will bridge the gap between (1) and (2). An important point noted by Sadler (1989) is that it should not be assumed that students know how to use feedback to improve their learning.

Written feedback with specific comments on errors is suggested by Maria Elwar, and Lyn Corno (1985) found that teachers could make a difference when they provided constructive comments to students. The information provided by Page (1958) as cited in Crooks (1988) and Woolfolk (1996) is that simple positive comments are beneficial while harsh criticism is counterproductive. Many authors such as Black & William, 1998; Burnett, 2002; Butler, 1987; and Young, 2000, concur with this by emphasizing the influence and importance of verbal and written statements directed to a learner. Race (2006) commented on over-detailed feedback forms and too many comments which can confuse students and complicate things for them. Race (2006) further suggests that feedback should be manageable and allow students to easily interpret and benefit from the feedback they need the most. In addition to the above types, other authors like Jacobs (1998) and Narciss (2008) talk about forms of feedback that include (a) knowledge of result, (b) knowledge of the correct result, (c) knowledge of performance, (d) answer until correct, (e) knowledge of task constraints, (f) knowledge about concepts, (g) knowledge about mistakes, (h) knowledge about how to proceed, and (i) knowledge about metacognition.

According to Shute (2008) cited in Black and William (1998), there are two main functions of feedback: *directive* and *facilitative*. Directive feedback is that which tells the student what needs to be fixed or revised. Such feedback tends to be more specific compared to facilitative feedback, which provides comments and suggestions to help guide students in their own revision and conceptualization. Corroborating this view is Archer (2010) who also talks of the directive feedback which informs the learner of what requires correction and the facilitative feedback which involves the provision of comments and suggestions to facilitate recipients in

their own revision. A different note was the research study reported by Kulhavy and Stock (1989) which talks about two types of information regarding learner assessment, that is, verification and elaboration. They further define 'verification' as the simple judgment of whether or not an answer is correct, and 'elaboration' as the informational aspect of the message, providing relevant cues to guide the learner toward a correct answer. Henning and Nottingham (2010) come up with what they call 'specific feedback' which is stated as the provider of detailed suggestions to a student concerning performance and how it can be improved in the future.

According to Burnett & Mandel (2010, p. 146) cited in Craven, Marsh & Debus (1991) another form of feedback is attributional feedback which is in the form of comments that refer to learner's efforts and it consists of two types which are known as effort and ability, suggesting that ability feedback was most valued by students and was the dominant influence for the development of self-concepts in specific subject areas. The students receiving effort teacher feedback showed significant improvements in their performance. Mueller & Dweck (1998) as cited in Dweck (1999) also pointed out that ability feedback resulted in students lying about their performance to impress peers, while effort feedback resulted in students giving a truthful account of their performance.

In addition, Burnett and Mandel (2010, p. 146) as cited in Fredenburg, Lee, and Solmon (2002) indicate that students determine their ability to perform a particular task through their cognitive appraisal of available information, including sources such as feedback provided by teachers or significant others. Blackwell (2007, p. 101) suggests that when giving feedback it is always important to start with the learner, and to ensure that feedback focuses on the learner's agenda, not the teacher's. In a different view, Ifenthaler (2010, p. 104) reports about model-based feedback is perceived as the use of conceptual models to help build mental models of the system being studied. Ifenthaler (2010) continues to say that model-based feedback is associated with the development of expertise and expert performance in a specific subject or task domain.

The timing of feedback is a contributing factor to the performance of the students. It is important for the teachers to note that feedback should be given immediately the

task is finished. This has been agreed by Anderson, Corbett, Koedinger, & Pelletier, (1995, p. 167) and they call it a 'cognitive tutor' which is considered as the best style in tutorials. Corroborating this view was the research study reported by Race (2006); Irons, (2008); Juwah et al, (2004); Shute (2008) explaining that feedback needs to be timely; this means feedback is more effective if it is provided timely since students can still recall how they addressed each assessed task (Race, 2006).

Beaumont and O'Doherty (2008, p. 48) concur with the above that the lack of timeliness of feedback was a common criticism; students complained that feedback was too late to be acted upon. It is of paramount importance to consider timing when giving feedback because learners need to be able to apply the feedback to future learning and assessments. Quilligan (2007, p. 103) fully agrees with Beaumont and O'Doherty (2008) when he argues that feedback doesn't always have to be given at the end of a student's session but sometimes it is helpful to give feedback midway.

Rowe and Wood (2008, p. 79) cited in Hattie & Timperley (2007); Parikh, McReelis & Hodges (2001); and Rucker & Thompson (2003) suggest that feedback is most effective when provided soon after task performance; is presented in a manner sensitive to the students' learning styles; clearly identifies strengths and weaknesses; has suggestions for improvements; and is constructive and motivating. However, Archer (2010) concurs with this by saying delayed feedback may be better for supporting transfer of knowledge, whereas immediate feedback may be more effective in the short-term and for supporting the development of procedural skills. Hartley and Chesworth (2000) also agree by saying they found that 59% of students in their study responded that feedback was given too late to be helpful, due to its being received after the end of the module.

In contradiction with the above, authors Evans et al.(2010, p. 449) see feedback as lack of time management by students, that teachers may give good feedback and students may be motivated to improve, but if they put off revising until the last minute, they are not likely to benefit from the feedback. Schmidt et al. (1989) summarised the point of timing by saying: results show that during the practice phase, performance decreased as the feedback interval increased. On the other hand, Swinnen, Schmidt, Nicholson & Shapiro (1990) and Schmidt & Bjork (1992)

are of the view that immediate feedback leads to shallow learning. Though it is important to give feedback at the earliest time after the task is done, it also has a disadvantage. Freestone (2009, p. 1) concurs with this by saying that if the assignments are marked quickly and returned to the students, then there is obvious potential for plagiarism to occur as students can pass around corrected work to students who haven't undergone the same assessment yet.

2.2.1. Oral or verbal feedback

This is the type of feedback that the teacher provides in response to the learner's action to a task which can shape up or down his/her future behaviour and to let him/her know how he/she is doing. If there is any need for praise in the process, it must be given for a reason. Other researchers such as Brophy (1981), Carroll, Houghton, Durkin & Hattie (2001), Carroll, Durkin, Hattie & Houghton (1997) and White & Jones (2000) suggest that praise delivered publicly by a teacher can be perceived as punishing by some students if delivered in the presence of a peer group that does not esteem school achievement as valuable. Teachers need to be careful of a difference between praise that looks at self and takes the attention away from the task and one that focuses on great effort for what has been done with regards to the task. One of the writers supported this by saying that:

A crucial part of verbal feedback involves the use of questions to judge pupil understanding and to steer the learning process. It is useful for teachers to reflect on the types of question that are used as there is a tendency in many classrooms for discussions to revolve round closed questions which focus on recall. Where questions are used effectively in providing feedback, open questions are often employed to guide and extend thinking, alongside closed questions which determine knowledge and understanding of content" (Clark, 2001, p. 16).

2.2.2. Written feedback

This is a form of communication between the learner and the teacher in an academic situation. When the learners have submitted their work or task to the teacher, in return their expectation is to see marking with clear and concise comments accompanied by marks. These remarks will either tell them what to do or will just be a comment that will make them feel proud or disappointed and frustrated. It is

therefore of great importance for the teacher to align the feedback with the standards of the curriculum.

There is a view, according to Clark (2001, p. 14), that written comments can be used to reinforce teaching points as well providing information on progress against the learning intention and indicating areas for improvement. Written feedback with specific comments on errors is suggested by Maria Elwar and Lyn Corno (1985) who found that teachers could make a difference when they provided constructive comments to students. The information provided by Page (1958) as cited in Crooks: (1988) and Woolfolk (1996) is that simple positive comments are beneficial while harsh criticism is counterproductive. Many authors such as Black & William (1998), Burnett (2002), Butler (1987) and Young (2000) concur with this by emphasizing the influence and importance of verbal and written statements directed to a learner. Race (2006) commented about a form of over-detailed feedback and too many comments which can result in confusing students and complicating things for them, making it difficult to separate out the important feedback. An important point noted by Sadler (1989) is that we should not assume that students know how to use feedback to improve their learning.

The researcher is of the view that the above authors may mean that written feedback has a feature of providing information, which can be used by the learner's parents in trying to help to monitor and support their child's progress. According to the researcher, it is very important for the teacher to give learners manageable feedback that can be easily interpreted and will benefit them the most.

In addition to the above given types of feedback, other authors such as Jacobs (1998) and Narciss (2008) talk about forms of feedback that include (a) knowledge of result, (b) knowledge of correct result, (c) knowledge of performance, (d) answer until correct, (e) knowledge of task constraints, (f) knowledge about concepts, (g) knowledge about mistakes, (h) knowledge about how to proceed, and (i) knowledge about metacognition.

It has been noted that though written feedback is so important it has some flaws that one would need to mention in this study. According to Boud (1995) and Hounsell

(1995), they argue that the language used in responding to feedback also affects the way in which a student receives written feedback and cites an example of judgmental statements which allow no room for manoeuvre making mention of examples such as 'good report', 'fails to answer the question' and 'poor effort'. Boud (1985) and Hounsell (1995) continue to say these are regarded as of no assistance to students; instead they are unhelpful to students. Additionally Archer (2010, p.103) supports the idea of written feedback but also states that the negative comments require support to produce positive outcomes and further said such feedback may contain challenging information which may be complicated by its length and complexity. On a different note, Page (1958) cited in Crooks (1988); Cross & Cross, (1981); and Woolfolk (1995) are of the view that feedback in the form of simple positive comments is beneficial while harsh criticism is counterproductive. Again, according to Kotzé (1999, p. 34), written feedback may lose impact because it lacks the immediacy of spoken comments and further suggests verbal feedback because it is more effective in the learning process.

Teachers write and say things which can readily be taken as comments about the person rather than their work and in doing so they link into the doubts and uncertainties which learners have of themselves. These remarks are often magnified at great cost to the self-esteem of the persons concerned. Similarly, Yorke (2003, p. 489) states that students may lose confidence if the distinction between product and person is not made. "I am a failure" may erroneously come to dominate over something like "I didn't understand what was expected of me.". In addition, Carless (2006, p. 221) is of the view that assignments are mainly a personal and individual activity, so if feedback is negative, it can be threatening to a student's self-perception.

Some studies from Hounsell (1987) and Ivanic, Clark and Rimmershaw (2000) identified the mismatches between teachers' and students' understanding of requirements of academic writing, as well as students' inability to understand teachers' comments on their writing, whereas Lea and Street (1998) make mention that terms like 'structure', 'argument' and 'clarity' were of little help to students, and even lecturers were found to have difficulty in explaining what a good argument would be. Carless (2006, p. 221) cited in Higgins (2003, p. 35) has the same opinion

as this by arguing that, “Many students are simply unable to understand feedback comments and interpret them correctly”. Mutch (2003, p. 35) concurs with the above writers by saying some kind of comments contain ‘implied development’ giving no indication of how the deficiency can be addressed and therefore being ‘of value only to those who recognise what the implied developments are’.

According to the study of Freestone (2009, p. 4) cited in Baldwin (1993) it is argued that one of the reasons why students may not read feedback is that they are unaware of how they are assessed and the criteria by which the merits of their work are judged. Freestone (2009) continues by saying, Higgins *et al* (2002) found that 67 % of their respondents admitted they did not understand the assessment criteria. Contrary to that, Young (2000, p. 415) states that it is the student’s level of self-esteem that affects the messages they receive, either positive or negative. Those with low self-esteem tend to view all feedback as a judgment of ability, whilst those with high self-esteem do not.

Besides the fact that feedback is important and effective in the educational process and the promotion of learning, there is evidence from other researchers such as Bailey (2009), Chanock (2000), Winter *et al* (2004) that students do not collect formative feedback and have experienced that every semester there is a large and persistent percentage of students who do not collect the accompanying feedback of marked assignments. Corroborating this view was the research study reported by Hounsell (1987), Chanock (2000), Winter *et al* (2004) and Carless (2006) that has been conducted in order to determine why students are dissatisfied and do not collect formative feedback. They identified reasons that pertain not only to the quality and quantity of the feedback comments but also to students’ lack of motivation when they performed badly and the suitability and aptness of the feedback’s communication method. Language is a contributing factor in the process of receiving feedback, especially in remote rural areas. According to the language policy, the Language of Learning and Teaching (LoLT) is English but some learners are unable to reach to the levels necessary for effective engagement with the curriculum. In other words, this might mean that in some areas the schools are not actively involved in the programmes that promote the LoLT. Even the lessons which are offered in the media, such as on radio and television, are conducted in English, the

language which is the medium of instruction. This is resulting in teachers opting for code switching in their classrooms in order to achieve their intended goals. This is done mostly by teachers whose home language is the same language as the learners they teach; this is resulting in teachers teaching more in mother tongue than in English which the language policy does not allow, but this works well for the teachers who are faced with this problem.

In the research study of Probyn (2009, p. 129) it is said that teachers recognised that learning through the medium of a poorly acquired additional language was stressful for learners.

Another view is that tutors and teachers complain about the lack of time that caused them to experience problems when they have to return marked tasks. This view is supported by Hounsell et al (2003, p.2) who think that the semesterisation and modularisation has resulted to more compressed curricular timetables in which assignments tend to be crowded towards the end of the courses, leaving the students with little or no scope to benefit from their tutor's feedback on their work.

It has been noted that although written feedback is very important and it has some flaws that one would like to mention in this study. According to Archer (2010, p. 103), is of the idea that written feedback is important to learners but also states that the negative comments require support to produce positive outcomes and further said such feedback may contain challenging information which may be complicated by its length and complexity. On a different note, Page (1958) cited in Crooks (1988); Cross & Cross (1981) and Woolfolk (1995) are of the view that feedback in the form of simple, positive comments is beneficial while harsh criticism is counterproductive. Again, according to Kotzé (1999, p. 34) it is said that, written feedback may lose impact because it lacks the immediacy of spoken comments and further suggests verbal feedback because it is more effective in the learning process.

Carless (2006, p. 221) cited in Higgins (2003, p. 35) comes with an important point by arguing that, 'many students are simply unable to understand feedback comments and interpret them correctly'. Mutch (2003, p. 35) concurs with this by saying that, some kind of comments contain 'implied development' giving no indication of how

the deficiency can be addressed and, therefore, are 'of value only to those who recognise what the implied developments are'. In trying to understand what the above authors say, the study of Freestone (2009, p. 4) cited in Baldwin (1993) see it different and has a view that one of the reasons why students may not read feedback is that they are unaware of how they are assessed and the criteria by which the merits of their work are judged. It continues by saying, Higgins *et al* (2002) found that 67% of their respondents admitted they did not understand the assessment criteria. Contrary to that, Young (2000, p. 415) states that it is the student's level of self-esteem that affects the messages they receive, either positive or negative.

2.2.3. Peer feedback

Peer feedback is one of the most important strategies that teachers can use that assists most learners to get feedback. There is a belief that learners learn far better from their peers than from the teachers. One of the reasons is that they spend most of the time together without looking at the length of the period and they understand each other far better than their teacher. Peer groups have a potential to reduce the teacher's workload by providing feedback that is so fruitful to other learners' learning and growth to a higher level of thinking. Accordingly, Liu, Lin, Chiu and Yuan (2001, p. 248) propose that, when asked to offer feedback to peers, students progress beyond the cognitive processes required for completing a given task, as they must now "read, compare, or question ideas, suggest modifications, or even reflect on how well one's own work is compared with others." They also say that receiving abundant and immediate peer feedback can prevent some errors and provide hints for making progress. Additionally, Lau (2006, p. 289) cited in Yazici (2005) defines collaborative learning (CL) as the instructional use of small groups where peer interaction plays a key role in learning; it helps increase student involvement, improve problem-solving and communication skills, and enhance student achievement. They continue by saying through CL students are allowed to explore and discover mathematical concepts, and the dynamics of the classroom can be changed by encouraging and motivating all levels of students (Kasturiarachi, 2004). In support of this, Alavi & Kaivanpanah (2008, p. 101) are of the view that peer feedback is usually solicited in cooperative classrooms where students have more opportunity to interact with each other. It is, therefore, important that teachers must

consider using this kind of feedback to reduce the workload and save time to be spent in the classroom.

2.2.4. Directive and facilitative feedback

According to Shute (2008) cited from Black and William (1998), there are two main functions of feedback: *directive* and *facilitative*. Directive feedback is that which tells the student what needs to be fixed or revised. Such feedback tends to be more specific compared to facilitative feedback, which provides comments and suggestions to help guide students in their own revision and conceptualization. Corroborating this view is Archer (2010) who also talks of the directive feedback which informs the learner of what requires correction and the facilitative feedback which involves the provision of comments and suggestions to facilitate recipients in their own revision. Barry (2008, p.1) argues that, descriptive feedback allowed the students to learn and understand their mistakes immediately, which in turn improved their learning. It must be noted that learners do not benefit if there are only marks available in their tasks unless there can be a specific guidance that points their strengths and weaknesses to improve their performance. Kulhavy and Stock (1989) differ with that by arguing that feedback providing two types of information to the learners which is the verification and elaboration. Verification is defined as the simple judgment of whether an answer is correct, and elaboration is the informational aspect of the message, providing relevant cues to guide the learner toward a correct answer. Henning and Nottingham (2010) come up with what they call specific feedback which is stated as the provider of detailed suggestions to a student concerning performance and how it can be improved in the future.

According to Burnett & Mandel (2010, p.146); cited from Craven, Marsh & Debus (1991) noted by US data talk of attributional feedback which is in a form of comments that refer to learner's efforts and constituted of two types which are known as effort and ability, suggesting that ability feedback was most valued by students and was the dominant influence for the development of self-concepts in specific subject areas. The students who receive effort teacher feedback showed significant improvements in their performance. Mueller & Dweck (1998, cited in Dweck, 1999) also pointed out that ability feedback resulted in students lying about their performance to impress peers, while effort feedback resulted in students giving a

truthful account of their performance. Additionally Burnett and Mandel (2010, p.146) cited from Fredenburg, Lee, and Solmon (2002) indicated that students determine their ability to perform a particular task through their cognitive appraisal of available information, including sources such as feedback provided by teachers or significant others.

The timing of feedback is a contributing factor to the performance of the students. It is important for the teachers to note that feedback should be given immediately the task is finished. This has been agreed by (J. R. Anderson, Corbett, Koedinger, & Pelletier, 1995, p. 167) and they call it a cognitive tutor which is considered as the best style in tutorial. Corroborating this view was the research study reported by (Race, 2006; Irons, 2008; Juwah et al, 2004; Shute 2008) explaining that feedback needs to be timely, this means feedback is more effective if it is provided timely since students can still recall how they addressed each assessed task (Race, 2006). Beaumont and O'Doherty (2008, p.48) concur with the above that, the lack of timeliness of feedback was a common criticism; students complained that feedback was too late to be acted upon.

When feedback is to be given, it is very much important to consider time because students are able to apply it to future learning and assessments. In addition, Quilligan (2007, p.103) argues that feedback doesn't always have to be given at the end of a student's session with the actor but sometimes it is helpful to give feedback midway. Additionally Rowe and Wood (2008, p.79) cited from (Hattie & Timperley, 2007; Parikh, McReelis & Hodges, 2001; Rucker & Thompson, 2003) suggests that feedback is most effective when provided soon after task performance; is presented in a manner sensitive to the students' learning styles; clearly identifies strengths and weaknesses; has suggestions for improvements; and is constructive and motivating. However, Archer (2010) concur with this by saying delayed feedback maybe better for supporting transfer of knowledge, whereas immediate feedback may be more effective in the short-term and for supporting the development of procedural skills. Hartley and Chesworth (2000) also agree by saying, they found that 59% of students in their study responded that feedback was given too late to be helpful, due to its being received after module end. Other researchers such as, Mory (1992, p.6) is of the view that 'learners performed even better on retention task when feedback was

delayed', especially on higher level cognitive tasks. This phenomenon has been called the *delay-retention effect* (DRE).

In a contradictory note Evans and et al.(2010, p.449) see it as lack of time management to students, that teachers may give good feedback, and students may be motivated to improve, but if they put off revising until the last minute, they are not likely to benefit from the feedback. Schmidt et al.'s (1989) summarised the point of timing by saying: results show that during the practice phase, performance decreased as feedback interval increased. On a contradictory note (Swinnen, Schmidt, Nicholson & Shapiro, 1990; Schmidt & Bjork, 1992) are of the view that immediate feedback leads to shallow learning. Though it is important to give feedback at the earliest time after the task is done, it also has a disadvantage. Freestone (2009, p.1) concur with this by saying, if the assignments are marked quickly and returned to the students, then there is obvious potential for plagiarism to occur as students can pass around corrected work to students who haven't undergone the same assessment yet.

2.3. HATTIE AND TIMPERLEY'S (2007) LEVELS OF FEEDBACK

Hattie and Timperley (2007, p. 86) state that the main objective of feedback "is to reduce discrepancies between current understandings and performance and a goal" . According to Hattie and Timperley (2007, p. 86) in order to say feedback is effective, it should address three important questions of the teacher and the learner which are as follows: Where am I going? (What are the goals?), How am I going? (progress?) and Where to next? (What more to do to improve progress?) The kind of questions asked addresses the notions of feed up, feedback, and feed forward. Blackwell (2007, p. 101) suggests that when giving feedback it is always important to start with the learner, and to ensure that feedback focuses on the learner's agenda, not the teacher's. On a different note, Ifenthaler (2010, p. 104) reports about model-based feedback which is perceived as the use of conceptual models to help build mental models of the system being studied. It continues to say, model-based feedback is associated with the development of expertise and expert performance in a specific subject or task domain.

Hattie and Timperley (2007, p. 86) identified four major levels at which feedback could be directed in order to influence its effectiveness which is namely: task level - corrective feedback or knowledge of results; process level – enhancing deeper learning; self regulation level - how students monitor, direct and regulate actions toward the learning goal; self level – the level of task performance, the level of process of understanding how to do a task, the regulatory or metacognitive process level, and/or the self or personal level. In addition, to the revised version of Kluger and DeNisi, the three levels of linked processes are identified as regulation of tasks performance. These processes are as follows: meta-task that involves self, task motivation which involves the focal task and task learning processes which is about the details of the focal task. Summarily, the aim of their levels is to ensure that feedback is targeted at students at the appropriate level.

2.3.1. Task level

At this level, the teacher will be tracking the performance of the learners through using feedback and assist them in finding their direction by using a certain strategy. Shute (2008, p. 154) is of the opinion that task-level feedback typically provides more specific and timely (often real-time) information to the student about a particular response to a problem or task compared to summary feedback and may, additionally, take into account the student's current understanding and ability level. Hattie and Timperley (2007:91) are of the same view that the task level feedback is often referred to as "corrective feedback". Hattie and Timperley (2007) both provide an example of a struggling student where there is need of greater support which is highly required as compared to a proficient student. Holdheide et al (2011, pp. 7, 10) supports this by saying how teachers design tasks for students which have many implications for if and how students learn mathematics (Boston & Wolf, 2006; Stein, Grover, & Henningsen, 1996). Holdheide et al (2011) continue to say high-quality tasks are those that are well matched to a student's level of understanding, providing a balance between challenging the student and limiting frustration and inadvertent misunderstandings and errors.

In their review of the power of feedback reported by Hattie and Timperley (2007, p. 86), four separate foci for classroom feedback were presented. Three of the four

types of feedback highlighted relate to providing feedback at the instructional level connected to learning and skill development. The fourth one involves providing feedback about the student as a person. They noted that personal feedback such as “good girl” or “great effort” typically express positive evaluations and feelings about the student but contain little task-related information. This means that the last type of feedback shows less engagement to students and lack of commitment to their learning and poor understanding of the given task. What is most important to the teachers is to understand that when giving feedback to the learners, this is assisting them in making sure that their teaching is effective and learners know exactly what is required in the task and to encourage them to do better. The teacher’s feedback should really focus on what the learners have done correctly and what needs to be corrected for future improvement. Hattie and Timperley (2007, p. 100) agree with this by saying that this feedback model highlights the demands on teachers if they are to teach effectively. It continues to say “It is difficult to document the frequency of feedback in the classrooms, except to note that it is low”.

2.3.2. Process level

During this level the teacher is highly involved in providing information on the progress learners have made with the task and as to whether the task is performed according to the expected standards. This is a stage where suggestions are given to learners to revisit the set goals and have some changes in the set standards of the task by making it easier and simpler or either motivate them to work harder. According to Hattie & Timperley (2007, p.9 3), they state that, “Feedback information about the processes underlying a task can act as a cueing mechanism and lead to more effective information search and use of task strategies, provided the cues assist learners in rejecting incorrect ideas and provide direction for searching and strategizing.” It is, therefore, significant for the learners to understand that if they are unable to describe what they do, they should know that they are unaware of what they are doing (2011, p. 7). This is supported by the idea of Holdheide et al, 2011, p. 7) who argue that:

“Mathematics teachers must know not only the content they teach, but also how students’ knowledge of mathematics is developed and structured; how to manage internal and external representations of mathematical concepts; how to make students’ understanding of mathematics visible; and how to diagnose student misunderstandings and

misconceptions, correct them, and guide them in reconstructing complex conceptual knowledge of mathematics (Ball, Lubienski, & Mewborn, 2001; Cohen & Hill, 2000; Darling-Hammond, 1999; Fennema & Franke, 1992). Moreover, teachers must understand how students reason and employ strategies for solving mathematical problems and how students apply or generalize problem-solving methods to various mathematical contexts (Cobb, 1986).

2.3.3 Self-regulation level

According to Nicoll and Macfarlane-Dick (2006, p .2) cited from Pintrich & Zusho (2002) self-regulation refers to the degree to which students can regulate aspects of their thinking, motivation and behaviour during learning. On a different note, Pintrich (2000, p. 453) define self-regulated learning as an active constructive process whereby learners set goals for their learning and monitor, regulate, and control their cognition, motivation, and behaviour, guided and constrained by their goals and the contextual features of the environment. Nicol^{a*} and Macfarlane-Dick (2006, p.199^a) have the view that self-regulation is manifested in the active monitoring and regulation of a number of different learning processes, e.g. the setting of, and orientation towards, learning goals; the strategies used to achieve goals; the management of resources; the effort exerted; reactions to external feedback; and the products produced. The more learning becomes self-regulated, the more students assume control over their learning, and the less dependent they are on external teacher support when they engage in regulatory activities (Zimmerman & Schunk, 2004). In addition, Schunk (2005, p. 174) quoted from Pintrich (2003) stated that students with better self-regulatory skills tend to be more academically motivated and display better learning.

Smith and King (2004, p. 204) came up with a cybernetic perspective which fits into the perspective of a *feedback standard gap* in teaching and learning, evaluating the effectiveness of a student performance based upon discrepancies between actual behaviours and criteria for behaviour communicated through instruction. Though there are so many attempts in trying to attempt feedback strategies, the reports are saying that it resulted in a decrease in task performance. Kluger and DeNisi (1996) proposed *Feedback Intervention Theory* (FIT) which is defined as actions taken by an external agent to provide information regarding task performance, presumably for the purpose of improving or correcting behaviour in some fashion. In their findings it

is said that feedback cues which draw attention to meta-task processes (threats or praise to self) retard performance, while feedback which draws attention to the task level, motivation and learning, results in improved performance. It is, therefore, suggested that teachers have to find means of communicating that a feedback standard gap exists without causing learners to feel that their performances is so deficient that they react defensively.

According to Shute (2008, p. 154) task-level feedback is regarded as the type of feedback that provides more specific and timely (often real-time) information to the student about a particular response to a problem or task compared to summary feedback, and may additionally take into account the student's current understanding and ability level. An example of a struggling student has been cited where there is need of greater support which is highly required as compared to a proficient student.

2.3.4. Self level

This is the level which is directed to self being praised and informs the learner that everything is correctly done, for example, "That is very good." At this level the focus is being shifted and the degree of success is being under-estimated and the value of learning is lowered. Praise is seen as demoralizing other learners if it is done publicly, but if it is directed to the effort taken, the self-regulation, the engagement, or the processes relating to task or performance (*"You're really great because you have diligently completed this task by applying this concept"*) it will have a great impact in developing the self efficacy and improve the performance of the learner. This is supported by the argument which says:

"Praise delivered publicly by a teacher can be perceived as punishing by some students if delivered in the presence of a peer group that does not esteem school achievement as valuable" (Brophy, 1981; Carroll, Houghton, Durkin & Hattie, 2001; Carroll, Durkin, Hattie & Houghton, 1997; White & Jones, 2000).

The above phrase could mean that some students see praise as an insult to those who cannot perform well in school work, especially if the teacher is doing it in the presence of others. Gager and Berliner talk about self-efficacy which is lowered in

the student's near future when their performances are compared with others and, therefore, they recommend that teachers should highlight progress rather than deficiency.

2.4. FEEDBACK AND ASSESSMENT

Assessment is an important aspect in education and has been defined in various ways by many researchers. Accordingly, Brown (2000) has viewed assessment as serving a number of purposes such as judging the mastering of knowledge, diagnosing difficulties, evaluating teaching methods, motivating learners to study and qualifying them to progress. Assessment goes through the process of gathering evidence, followed by its interpretation and, finally, it ends in an action based on the hypothesis reached (William & Black, 1996). Corroborating this view are Hanna & Dettmer (2004) who specifically say assessment is the way instructors gather data about their teaching and their students' learning. Callingham (2010) is of the opinion that assessment is regarded as more than the task or method used to collect data about students. It includes the process of drawing inferences from the data collected and acting upon those judgements in effective ways. Black and William (1998) suggest that teaching is more effective when it assesses and uses prior learning so that the teaching may be adapted to the needs of students. Assessment has to follow certain processes that lead to summative assessment, that is, a judgement which encapsulates all the evidence up to a given point (Taras, 2005).

Although assessment has different terms that academics use, this study will talk about the commonly used types of assessment at the high school level which are the formative and summative forms. Summative assessment is defined by Taras (2005) as the process of assessment that leads to summative assessment, that is, a judgement which encapsulates all the evidence up to a given point. Formative assessment refers to activities that enable learners and practitioners to monitor learning, and to use the information generated to align subsequent learning and teaching activities (Davies, 2010). Formative assessment provides feedback and information during the instructional process while learning is taking place. Formative assessment measures student progress but it can also assess your own progress as an instructor.

Feedback is the result of the task performed. It can be provided by any of the following: teacher, peer, media, parent, or in the text. Sadler (1989) defined feedback as the information that shows how far apart is the “performed” to the “expected” and trying to minimize that difference (Sadler, 1989). In addition, feedback is defined by Ramaprasad as information about the gap between the actual level and the reference level of a system parameter which is used to alter the gap in some way (1983, p. 4). Feedback can be verbal or written; it becomes effective when learners understand it as part of an ongoing dialogue which helps them to improve their work (Clark, 2001). Flower (1979) defines feedback as a fundamental element of a process approach to writing. Further, it can be defined as input from a reader to a writer with the effect of providing information to the writer for revision.

Hattie (2003, p. 7) describes the benefits of feedback as follows:

“Feedback can lead to increased effort, motivation or engagement to reduce the discrepancy between current status and the goal, it can lead to alternative strategies to understand the material, it confirms to the students that they are correct or incorrect, it can indicate more information is available or needed, it can point to directions that the students could pursue, and it can lead to restructuring understandings.”

The view above is supported by Hattie (1999) that feedback has a significant impact on learning; it has been described as "the most powerful single moderator that enhances achievement." Further argument is that its main objectives are as follows:

- justify to students how their mark or grade was derived
- identify and reward specific qualities in student work
- guide students on what steps to take to improve
- motivate them to act on their assessment, and
- develop their capability to monitor, evaluate and regulate their own learning (Nicol, 2010).

Nicol and Macfarlane-Dick (2006, p. 206) describe feedback as "anything that might strengthen the students' capacity to self-regulate their own performances." Therefore, out of the above points given on definitions and clarities, the topic can be concluded by saying there is a close link between assessment and feedback which is described by Catherine Garrison and Michael Ehringhaus (2013) as descriptive

feedback which provides students with an understanding of what they are doing well, links to classroom learning, and gives specific input on how to reach the next step in the learning progression. In other words, descriptive feedback is not a grade, a sticker, or a “good job”. William (1999) summarised it by saying the use of feedback improves performance when it is focused on what needs to be done to improve, and particularly when it gives specific details about *how* to improve.

2.5. ROLES AND RESPONSIBILITIES OF TEACHERS AND LEARNERS ON FEEDBACK

The role that should be played by the teacher in class is to enhance the learner’s participation in the tasks given. The teaching style has a great impact on the learner’s performance. Teachers should make sure that the teaching style matches with the learning style to avoid limited learning or no learning at all. If learners are engaged and work with the teacher in class, they gain a lot of information, more than they would from doing the work on their own. Learners also have a greater responsibility to one another by establishing a relationship with the school work and they should set goals for understanding mathematics.

Learners can be given homework because it is taken as an extension of the curriculum and an opportunity to make sure that even during afterhours they interact with the school work. Fredenburg, Lee, and Solmon (2002) have a view of feedback which states that it provides an indication that students determine their ability to perform a particular task through their cognitive appraisal of available information, including sources such as feedback provided by teachers or significant others.

2.6. LEARNER PERCEPTIONS ON FEEDBACK

Research studies have already been conducted on learners’ perceptions of the feedback they receive from their teachers and has been compared with the teacher or lecturer perceptions on feedback they give to learners either it is in the form oral or written feedback.

Though feedback is very important for the quality of teaching and learning, the research on learners’ experiences of feedback, in particular at high school level,

have been neglected by other researchers. Poulos and Mahony (2008, p. 3) have identified three key dimensions relating to effectiveness of feedback which are 1) perceptions of feedback, 2) impact of feedback and 3) credibility of feedback. They continue to say students prefer specific rather than general feedback of which the general one means feedback was assumed to be feedback provided for the whole class which did not necessarily relate to them as individuals. A large majority of students expressed the desire that feedback should include a grade as a standard indicator and criterion-referenced comments to enable them to improve.

In a research study done by Rowe and Wood (2008, p. 78) they reported that students valued feedback and were aware of its importance to improved learning outcomes. They continued by saying some students prefer written feedback, specific comments addressed to the individual on an assignment or exam, but they expressed empathy for teachers, recognising the time and resource constraints of providing such a personalised service due to large class sizes. Some students expressed two purposes of feedback: a judgement of the standard reached and guidance to improve performance. Rowe and Wood further says ,students perceived that this system of guidance provides quality feedback within a supportive relationship offering frequent opportunities for discussion of progress. Beaumont and O' Doherty (2008, p. 7) summarised these perceptions by modelling them as the Dialogic Feedback Cycle (DFC) which is comprised of three sub-processes generated from the data: preparatory guidance, in-task guidance and performance feedback (post submission). It has been reported that there is also unhelpful feedback which is too general and lacking in detail, as highlighted by the following remarks:

... two word notes at the side of the report didn't help much.

... we usually had a tick or something circled to say something was wrong. Usually we could work out what went wrong but some analysis of what was lacking would have helped in future assessments.

... although there was feedback, it was not particularly detailed. (Beaumont and O' Doherty (2008, p. 7))

Learners have a feeling that if feedback lacks guidance, meaning there are no suggestions given for improvement, it becomes unhelpful to them. If there is constructive criticism in the learners' work, they become motivated and improve their performance, though it is very rare to find comments to those who have scored higher marks in the task.

2.7. THEORETICAL FRAMEWORK

In this study the researcher has used self-determination and achievement theories as a theoretical framework which explains the psychology behind the reactions to feedback and how these reactions relate to learner performance. "Self-determination theory (SDT) emphasizes the significance of three basic psychological needs in people's self-motivation and healthy psychological growth - the needs for competence, relatedness and autonomy, whereas the achievement theory is about the goals in different achievement situations which guide students' behaviour." (Mac Inerney et al, 1994, p. 4) Furthermore, there are two goal structures, mastery goal which is about developing an individual with new skills and improves the level of competence and is self-referenced, whereas performance goal is a focus of one's ability and sense of self-worth. McClelland (2010) came up with a good example of students with a high need for achievement who tend to get better grades than equally bright students with weaker achievement needs. As such, SDT is of value in the education fraternity where students' natural tendencies to learn represent perhaps the greatest resource educators can tap.

Yet it is also a domain in which external controls are regularly imposed, often with the well-intended belief that such contingencies promote students' learning. There are various important elements of SDT and factors that are discussed in this study below such as extrinsic motivation, intrinsic motivation... These theories are further explained below.

2.7.1 Achievement goal theory

Achievement goal theory as explained by Dweck (1986) and Nicholls (1984), has been concerned primarily with examining the antecedents and consequences of achievement goals. In this theory some studies (Ames, 1992; Dweck and Leggett,

1988; Nicholls, 1984) indicate that there are other goals that are central to this theory which are known as mastery and performance goals and they clearly give a distinction between these two as follows: Mastery goals involve the aim of learning new material or improving one's skills and are associated with various positive outcomes, including intrinsic motivation, self regulated learning, and deep-level learning. In contrast, the aim of performance goals is to perform better than others or avoid performing worse than others and are ego-oriented. Elliot (2005) argues that achievement goals are by definition rooted in definitions of competence. Additionally, Stornes, Bru & Idsoe (2008, p. 316) are of the view that the *motivational climate* is one of the core constructs in the achievement goal framework. It refers to "perceptions of how success is defined in an achievement setting" or "students' perceptions of motivational goals and purposes present among teachers and fellow students." They think of the learning environment and its social factors as the crucial aspect of achievement goal development as contributors to the construction of a motivational climate which focus on mastery.

According to the study of Bembenuitty* (2010, p. 4) cited from Atkinson (1964) Schunk, Pintdch, & Meece (2008) report on the idea of Atkinson's theory of achievement motivation which posits that motivation is a product of three components: motives, probability of success, and incentive value. It further explains the important concepts as follows: *motives* refer to individuals' dispositions to seek success or to avoid failure; *expectancy* refers to the subjective probability of success; and *incentive value* refers to pride, affect, and sense of accomplishment one will have for accomplishing a task.

2.7.2 Self determination theory

Self determination theory (SDT) is a person-centred motivational theory that offers a framework to understand the factors in the learning environment that impact student motivation and enhance student learning (see Deci, Koestner & Ryan, 1999; Deci & Ryan, 2000; Levesque, Sell, & Zimmerman, 2006; Vallerand, 1997 for reviews). According to Deci et al (1991) SDT is concerned primarily with promoting in students an interest in learning, a valuing of education, and a confidence in their own capacities and attributes. It is further explained that it focuses on how social and cultural factors facilitate or undermine people's sense of volition and initiative in

addition to their well being and the quality of their performance. According to SDT (Deci & Ryan, 1985) positive learning environments increase levels of student motivation and learning outcomes. To be motivated means to be moved to do something. When a person is intrinsically motivated, it means that a person is moved to act for the fun or challenge entailed rather than because of external prods, pressures, or rewards. Bembenutty*(2010, p. 2) cited from Zimmerman (2008a) concur with this by saying self-regulation of learning refers to learners' ability to sustain effort, maintain motivation and positive feelings, and use effective learning strategies in order to pursue academic goals. Additionally, Ryan and Deci (2000, p. 55) are of the view that intrinsic motivation refers to doing something because it is inherently interesting, while extrinsic motivation refers to doing something because it leads to a separable outcome. A survey of responses done by Levesque-Bristol and Stanek (2009) shows that students perceived the learning environment as positive and that their level of motivation, including intrinsic motivation, increased over the semester. In summary, SDT is defined by Deci & Ryan (1985) as an organismic meta-theory of motivation that assumes human beings are active organisms who are driven by three psychological needs.

In the study of Deci and Ryan (1985), they talk of various forms of motivation that fall on a continuum of self-determination and that are associated with different behavioural and psychological outcomes. These forms include a motivation which means absence of regulation or lack of motivation, external regulation, introjections, identification, integration, and intrinsic motivation. Csikszentmihalyi (1975) used the term "autotelic" to describe such behaviours for which the purpose of the activity is, in a sense, the activity itself. According to Deci (1975) this gives meaning to the terms: extrinsically motivated behaviours are those performed as a means to an end, whereas intrinsically motivated behaviours are those performed for the pleasure and satisfaction inherent in performing an activity, and external regulation and introjections are non-self-determined forms of extrinsic motivation wherein students perform activities to avoid a negative outcome or obtain a positive outcome (external regulation) or avoid feeling guilty (introjection). Ryan & Connell (1989) fully agree with this by saying intrinsically motivated behaviours are the prototype of autonomy which are undertaken out of interest and sustained by the spontaneous thoughts and feelings that emerge as one performs the activity, whereas extrinsically motivated

behaviours are undertaken and sustained because of a contingency such as the offer of a reward.

On a different note, Ee et al (2007, p. 139) are of the same view and make mention of the four types of behavioural regulations which are explained as follows: External regulation, the least self-determined form of extrinsic motivation, refers to behaviour that is controlled by external means, such as rewards or external authority. Introjected regulation refers to behaviour that is internally controlled or self-imposed, such as acting out of guilt avoidance or ego-enhancements. On the contrary to that, Deci & Ryan (1991) are of the view that introjections refers to a partial internalization in which external regulations are taken in by the individual but are not accepted as his or her own because it is a process in which a regulation becomes part of a person's psychological makeup but not part of the person's coherent sense of self. Identified regulation, a more self determined form of extrinsic motivation, refers to acting according to one's choice or values.

Ryan and Deci (1999) are of the view that, although, in one sense, intrinsic motivation exists within individuals, in another sense intrinsic motivation exists in the relation between individuals and activities. Finally, intrinsic motivation, which is the highest level of self-determination, refers to behaviour that emanates fully from the self and is undertaken solely for its own sake or enjoyment. This theory comprises of five mini-theories which are listed as: cognitive evaluation, organism integration, causality orientations, basic psychological needs and goal contents. To further explain what these theories mean, a definition of each is provided by Deci & Ryan (2000) in this manner:

1. Cognitive Evaluation - is concerned with intrinsic motivation based on the satisfactions of behaviour and addresses the effects of social contexts on intrinsic motivation or how factors such as rewards, interpersonal controls and ego involvements impact intrinsic motivation and interest.
2. Organism integration addresses the topic of extrinsic motivation in its various forms with their properties, determinants and proficiencies and concerned with social contexts that enhance internalization.

3. Causality orientations describe individual differences in people's tendencies to orient towards environments and regulate behaviour in various ways.
4. Basic psychological needs and goal contents elaborate the concept of evolved psychological needs and their relations to psychological health and well-being.
5. Goal contents grow out of the distinctions between intrinsic and extrinsic goals and their impact on motivation and wellness.

There is an opinion suggested by deCharms (1968) about SDT, where he says the motivated behaviours vary in the degree to which they are autonomous, meaning they have an internal perceived locus of causality and are experienced as volitional, and are performed out of interest or personal importance *vice versa* the controlled behaviours of Ryan (1982) that have an external perceived locus of causality and are experienced as being pressured by interpersonal or intrapsychic contingencies or demands, such as the feeling that one has to achieve high grades to be a worthy person. The concept of 'autonomous' is further explained by saying that there is an individual in a position of authority, such as a teacher, who takes the other's perspective, in this case the student, acknowledges the other's feelings and provides the other with pertinent information and opportunities for choice, while minimizing the use of pressures and demands. The teacher provides necessary information while encouraging students to use the information in solving a problem in their own way. In contrast, an authority that is controlling pressures others to behave in particular ways, either through coercive or seductive techniques that generally include implicit or explicit rewards or punishments. For example, the teacher tells students that they have to solve problems in a particular way in order to do well on a test. This therefore means that if one is autonomy supportive it would mean the same as being student-centred and enhance intrinsic motivation and promote identification with external regulations, while controlling contexts tend to undermine intrinsic motivation and forestall internalization. Grolnick & Ryan (1989) cited from Deci, Schwartz, Sheinman & Ryan (1981) report that these theories of autonomy-supportive are the findings from the study of internalization.

2.8. CONCLUSION

While there have been studies on learner perceptions in feedback in different levels of higher education institutions, the perceptions in the level of Further Education and Training band (FET) remains neglected. So many researchers have highlighted the importance of feedback in supporting effective learning and teaching to improve performance and suggested that feedback be prompt, timely, regular, supportive, constructive, meaningful, non-threatening and helpful (Atack, 2003; Grandzol & Grandzol, 2006; Huckstadt & Hayes, 2005; Institute for Higher Education Policy, 2000; Mancuso-Murphy, 2007; Seiler & Billings, 2004; Smith, 2005; Swan, 2004). Through feedback, learners are able to assess existing knowledge, reflect on what they have learned and what they still need to learn, and receive suggestions for improvement of future work. Feedback from the instructor to the student is considered to be one of the key elements of instruction because it is generally assumed to facilitate learning (Kowitz & Smith, 1987). Black & William (1998) are of the view that feedback and learning have supported the importance of feedback, documenting that effective feedback leads to gains in student learning. The motive behind it is to make teachers aware of what they should consider when they give feedback to the learners and also to the learners to look at what can assist them in order to improve their performance.

CHAPTER 3

METHODOLOGY OF THE STUDY

3. 0. INTRODUCTION

In chapter three the researcher describes the methodology that the study is using with the aim of announcing to the reader how this study has been carried out. This chapter explains what is meant by qualitative research, the orientation within the interpretive tradition, and the ontological and epistemological methods. In this chapter the following is covered: the research design; data collection methods; data and document analysis; research rigour, ethical considerations and the limitations of study.

3.1. RESEARCH APPROACH

This study aims at finding out what, how and when the learners are receiving feedback; this means it aims to investigate learner perceptions on feedback that is presented to them by their educators in trying to improve teaching and learning in their subjects in the selected underperforming FET schools in the East London district in the Eastern Cape.

In order for the researcher to do so, the work is guided by qualitative study because it relies on the interpretive approach about human beings, and therefore describes the experiences of the learners' lives through interpreting the learners' perceptions on feedback. In this case it means that the researcher is directly involved in the process of collecting data and getting a deeper insight into the problem which will be followed by analysis,. A supporting statement by Creswell (2003, p. 182) is that, "Qualitative research is fundamentally interpretive."

This type of approach is very relevant to the study because it puts emphasis on what people say, their feelings and actions and later records their responses. It also consists of the most important methods which are participant observation, in-depth interviews, and focus groups which assist in formulating a specific type of data, generating some concepts as well as getting the controversial issues and to find out on your own. This has resulted from the fact that qualitative research has established a momentum of being a mode of inquiry.

Though this type of approach is good, it is cost effective and time consuming. Denscombe (2007, p.19) fully agree with this by saying the face-to-face interview is a more expensive way of conducting the survey than the use of the post, internet or telephones to collect information. Interviewer time and interviewer travel costs are considerable. According to Merriam (2002, p. 6) the interpretive qualitative inquiry approach is concerned with understanding the meaning that participants make of a situation or phenomenon. In addition, Creswell (2003, p. 182) states that the qualitative research is fundamentally interpretive; this means that the collected data is analysed, interpreted and later conclusions are drawn. A similar view held by van Rensburg (2001, p. 16) about the interpretive paradigm is that interpretivists can only understand the world as it appears to them and not as it really is. The study will be strengthened by its validity and reliability where more than one method is used, such as triangulation and quantitative research.

A very important point made by two researchers (Kirk and Miller, 1986, p. 30) is that "Asking the wrong questions actually is the source of most validity errors." Devices guarding against asking the wrong questions are critically important to the researcher. According to other researchers like Merriam (1995, p. 52), the purpose of qualitative research is for clarifying and understanding phenomena and situations when operative variables cannot be identified ahead of time, finding creative or fresh approaches to looking at over familiar problems, understanding how participants perceive their roles or tasks in an organization, determining the history of a situation, and building theory, a hypothesis or generalizations.

The qualitative approach is defined by Ospina as cited by (Shank, 2002, p. 5) as "a form of systematic empirical inquiry into meaning". By *systematic* it means "planned, ordered and public", following rules agreed upon by members of the qualitative research community. By *empirical* it means that this type of inquiry is grounded in the world of experience. *Inquiry into meaning* says researchers try to understand how others make sense of their experience. Denzin and Lincoln as cited by De Vos (1998, p. 240) define qualitative approach "as a multiperspective approach utilizing different qualitative techniques and data collection methods to social interaction,

aimed at describing, making sense of, interpreting or reconstructing this interaction in terms of the meanings that the subjects attach to it”.

Neuman, Denzin and Lincoln as cited by De Vos (1998, p. 242) define qualitative research as an inductive form of reasoning, developing concepts, insights and understanding from patterns in the data. Qualitative research is further perceived by Anderson (1990, p.119) as a form of inquiry that explores phenomena in their natural settings. According to Emerson cited from Tutty, Rothery and Grinell (1996, p. 4) qualitative research is the study of people in their natural environment as they go about their daily lives. Additionally, Andrade (2009, p. 43) generally defines qualitative research as a:

“study process that investigates a social human problem where the researcher conducts the study in a natural setting and builds a whole and complex representation by a rich description and explanation as well as a careful examination of informants’ words and views” (Creswell, 1998; Miles & Huberman, 1994; Morgan & Smircich, 1980).

In collaboration with the above statement, Eisenhauer, Orband & Wyneden (2000, p. 93) are of the view that in qualitative studies the researchers rely heavily on collecting data through interviews, observations, written materials and audiovisual material.

Baugh (1990, p. 32) and Fink (1995, p.83) explain that in the qualitative research design there are different research designs which include various aspects such as ethnography, phenomenology, biography and rhetoric which are regarded as strong strategies in this method. On a different note Guba and Lincoln (1994, p. 105) have presented a similar opinion that both qualitative and quantitative methods may be used appropriately with any research paradigm. They further says that questions of method are secondary to questions of paradigm, which we define as the basic belief system or worldview that guides the investigator, not only in choices of method but in ontologically and epistemologically fundamental ways.

Qualitative research is mostly used in this study because the researcher has looked for answers that come from the participant's mind to posed questions, collects evidence and produces findings from the first hand information. This means that the human attitudes or behaviours, emotions, beliefs are dealt with as well as some factors such as socio-economic status and social norms in a more exploratory or interpretative way. Arguable, participants are the most central in this approach and therefore are given a chance to weigh the risks in the study and what benefits are associated with role they play, then they can decide if they are in or out. This means that it is very important for the researcher to fully inform and make them understand what their participation involves.

The qualitative research has got its advantages such as making use of open ended questions, the why and how style of questioning, that is probing questions in a controlled environment. By doing so the participants are able to respond in their own words freely, elaborating and also giving unanticipated responses to the researcher. On the other hand the researcher is building up a relationship with the participant which will cause the research to be less formal. This means that it has a strong hold of understanding and appreciation of human thoughts, beliefs and behaviours respectively. According to Lowhorn (2007, p. 3) qualitative research seeks to explain a current situation and only describes that situation for that group.

Since only a current situation is observed, all qualitative research is done in the field. In the qualitative research, the researchers depend on interpretive critical social science where the emphasis is on experience and interpretation which is concerned with meaning while seeking to understand social actors' understanding of situations as well as an endeavour to create descriptive analyses that emphasise deep, interpretive understanding of social phenomena (Patton, 2002).

Taylor and Bogdan as cited by (De Vos, p. 243) are of the view that the qualitative researcher becomes concerned with understanding naturalistic observation and also the subjective exploration of reality from the perspective of the researcher as an insider in the research process. According to Greenhalgh (2001) qualitative research takes an inductive approach in which theory is generated from research, as opposed

to the deductive approach in quantitative research in which the research is used to test the theory.

Quantitative research is defined as the type of method which is supported by the positivist or scientific paradigm. It leads us to regard the world as made up of observable, measurable facts” (Glesne & Peshkin, 1992, p. 6) though their assumption that “social facts have an objective reality” and “variables can...be identified and relationships measured” (p. 7) is problematic. It comes from an interpretive perspective which is concerned with interpreting and understanding phenomena through the meanings that people attach to them. The researcher will use data collection techniques, such as observation and unstructured interviews, which produce data in the form of words which will interpret the verbal responses of the learners.

Qualitative research analyses the information which comes from someone else through interviews and observations; the researcher then interprets it into meaning that needs to be tested and thus demonstrate that the study is credible. According to Coughlan, Cronin, Ryan (2009, p. 309) cited from Lambert and Loiselle (2007) interviews are widely used as a data collection tool in qualitative research. They are typically used as a research strategy to gather information about participants’ experiences, views and beliefs concerning a specific research question or phenomenon of interest.

According to Eisenhauer et al (2000, p. 94) they argue that the purpose of qualitative studies is to describe a phenomenon from the participant’s point of view through interviews and observations. Kvale (1996, p. 1) states that interviews allow people to convey to others a situation from their own perspective and in their own words. The interviews are done in a focus group consisting of a small number of respondents which is the best way of exploring and interpreting other people’s messages and because it is operated in a social setting.

3.1.1. Weaknesses of qualitative research

Though qualitative research is used in this study, it has got its weaknesses that the researcher is aware of. Because it is stronger on long descriptive narrative, the

problem is on categorization of the events or the activities which is known as reliability. The researcher is aware of the fact that the study should at the end produce the best results that can be trusted by other researchers and find it interesting. Reliability is defined by Hammersely (1992, p. 67) as the:

“Degree of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions.”

On a different note, Berger (1998, p. 143) argues that reliability of a method (questionnaire, sample, focus group, etc.) is the degree of consistency whereby the same results would be produced by different researchers using the same method. Another study conducted by Neuman (1997, p. 72) states that from an interpretive approach, in developing a case study, the purpose is not to guarantee that a second researcher will arrive at exactly the same conclusions as the first one might have; the second researcher can use the same data and give a different interpretation based on her/his own beliefs and abilities to grasp the essence of the emotional context; i.e. “empathetic or appreciative accuracy”.

Reliability is also defined by Joppe (2000, p. 1) as the extent to which results are consistent over time and are an accurate representation of the total population under study. This is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable. Golafshani (2003, p. 601) cited from Stenbacka (2001, p. 551) fully supports the idea by giving a definition that reliability is a concept to evaluate quality in a quantitative study with the “purpose of explaining” while the quality concept in a qualitative study has the purpose of “generating understanding”. Lincoln and Guba (1985, p. 300) use “dependability” in qualitative research which closely corresponds to the notion of “reliability” in quantitative research.

On a contradictory note some researchers state that reliability in qualitative research is not relevant. Stenbacka (2001, p. 552) supports this and comes with a point that “the concept of reliability is even misleading in qualitative research. If a qualitative study is discussed with reliability as a criterion, the consequence is rather that the

study is no good.” He further says that if the reliability issue concerns measurements, then it has no relevance in qualitative research.

Patton (2001) is of the view that validity and reliability are two factors which any qualitative researcher should be concerned about while designing a study, analysing results and judging the quality of the study. Adrande (2009, p. 50) cited from” (Trauth, 1997, p. 242) states that, indeed, reliability for qualitative research “means producing results that can be trusted and establishing findings that are meaningful and interesting to the reader instead of showing consistent results by repeated analyses. This means that if the qualitative research is used together with the quantitative methods, the data will be easier interpreted to get a better understanding of what it means.

3.1.2. Orientation of the study

Given the focus of the study, that is, perceptions of learners in the feedback they receive in mathematics, the study was guided by the qualitative approach and thus its orientation is within the interpretivist tradition which Merriam (2002) has described as a concern with understanding the meaning that participants make of a situation. According to Cohen, Marion and Morrison (2000) they are of the opinion that the central endeavour in the context of the interpretive design is to understand the subjective world of human experience. Qualitative research uses multiple methods that are interactive and humanistic (Creswell, 2003, p. 181). In this study, the learners who study mathematics in grade 12 reported to the researcher their experiences about the feedback they receive from their teachers to have a common understanding of how their feelings are. This would mean that the research will get the information through asking questions to get a sense of how things are done in their schools. This comes to a point that the interpretive paradigm is very much suitable for the study as it involves the group and the individuals and, therefore, the human activity. Gibbons and Sanderson (2002, p. 9) argue that interpretivism is an umbrella term normally associated with qualitative research methods for evaluation in the social science.

This paradigm was relevant for the study because the interviews, the official documents, the groups for discussion in a form of focus groups and individual interviews were all used for the success of the study. Van Rensburg (2001) argues that interpretivist researchers are interested in contextual meaning-making rather than generalised rules. According to Creswell (2003, p. 182) he states that qualitative research is fundamentally interpretive. This would mean that after the data has been collected, the researcher will interpret it. Qualitative research design is seen as a study of things in their natural setting, attempting to make sense according to what people say (Denzin and Lincon, 2000). This purely means that the interpretivist approach is looking at how people live in their society. This, therefore, means that a researcher has to apply a sense of what is called 'ontology' which means that, the study is concerned with the questions pertaining feedback in mathematics and 'epistemology' which is the information in a form of knowledge from the respondents. The seeking of knowledge will be done without showing any biasness to what they have said

3.2. RESEARCH DESIGN

The researcher has designed a plan and a structure in order to gain evidence when questions are asked. According to McMillan & Schumacher (2006, p. 22) research design refers to the plan and structure of the investigation used to obtain evidence to answer research questions. It means it is the process which informs the procedures that are followed when conducting the study. Research design is defined by Mouton (2001, p. 55) as a plan to investigate the research question and to make sense of the scientific manner in which to address it. Simply, it is the plan that the researcher used in order to continue with the research work to collect the data. Therefore, the design was relevant in this study as it looked at providing an in-depth description of a small number of cases (Mouton: 2001, p. 149). The aim of the study was to hear the learner perception in the feedback they receive from their teachers in mathematics. The study was then guided by an interpretive design whereby the researcher had interviews with the learners of grade 12 doing mathematics as a subject.

3.2.1. Case study

The focus is on sampling and selection of participants, the interviewing process, analyzing the data of respondents and its trustworthiness. A case study is the output in the qualitative methodology. A case study has been defined by Freud (2007) as “in-depth investigations of a single person, group, event or community, where data is gathered from a variety of sources and by using several different methods e.g. qualitative approach and interviews in this study”. It is one of the most common ways to do a qualitative inquiry (Stake, 1992). According to Stake (1995) and Yin (2003), an advantage of using a case study is that it is based on the constructivist paradigm. In addition Crabtree & Miller (1999) are of the view that the approach involves close collaboration between the researcher and the participants, while enabling participants to tell their stories.

According to Yin (2003) a case study design should be considered when: (a) the focus of the study is to answer “how” and “why” questions; (b) you cannot manipulate the behaviour of those involved in the study; (c) you want to cover contextual conditions because you believe they are relevant to the phenomenon under study; or (d) the boundaries are not clear between the phenomenon and context. Further, Yin (1984) notes three categories, namely, exploratory, descriptive and explanatory case studies whereas McDonough and McDonough (1997) have the view that there are other categories which include interpretive and evaluative case studies. Campbell (1975) is of the view that multiple-case designs enhance and support the previous results. The important thing about using a case study in this study is that it has allowed me to discover knowledge in a systematic way using a variety of data sources. I decided to use the multi-safe design in gathering the data on the learner perceptions about the feedback they receive from their teachers and later interpret it.

In this study, the situation at present is that one of the schools has not been performing well in mathematics the other one is doing well. Both schools have the teachers for the subject and the learners get the feedback.

3.2.2. Interpretive case study: advantages and disadvantages of using them

The researcher used the case study because it is very good in answering the 'why' and 'how' questions in order to get in-depth information through observation and apply subjective judgments so as to analyse the collected data and at the end to make an interpretation of the whole scenario. Gillham (2000, p. 1) defines a case study as "a unit of human activity embedded in the real world which can only be studied or understood in context." Additionally, Freud and Cross (2002) emphasised the advantages of using case studies as providing detailed and sufficient data which is taken from people and real life.

According to Harling (2002, p.1) a case study is defined as a holistic inquiry that investigates a contemporary phenomenon within its natural setting. Other researchers such as Dencombe (2007, p. 44) define case studies as a focus on one (or just a few) instances of a particular phenomenon with a view to providing an in-depth account of events, relationships, experiences or processes occurring in that particular instance. He further says that when researchers opt for a case study approach they buy into a set of related ideas and preferences which, when combined, give the approach its distinctive character. Collaborating with other views, Yin (2003, p. 13) defines the case study as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident and in which multiple sources of evidence are used."

Freud (2007) is concerned about how the case study can be used and points out that one cannot generalize the results to the wider population from a single case; and therefore the researcher can never know whether the case investigated is representative of the wider body of similar instances. Though the case study has disadvantages, the researcher is of the view that the case study is very relevant in this work because of the quality of performance of the learners in mathematics yet they are provided with feedback at all times in their schools. In this study, the researcher is looking at studying the cases of two (2) Senior Secondary Schools in the district of East London.

3.2.3. Case selection

In the discussion of Lancy (1997), the view about a case study in the manner in which it should be arranged in organising social data and looking at objects that are studied as a whole. It is imperative for the researcher to choose a few participants to collect the data so as to do an in-depth investigation to interview those few. It is for that reason that I have selected the two schools based on the quality of performance so as to get an understanding of and an insight into learner perceptions on the feedback they receive in the subject of mathematics.

3.2.4. Case descriptions

3.2.4.1. School A

This school is situated in an urban area about eight (8) kilometres away from the city of East London. It is built in a community of Rural Development Project (RDP) houses. The school consists of the about forty-five (45) grade twelve mathematics learners. The school starts from grade eight (8) to twelve (12). It offers the commercial and general subjects in Further Education and Training phase (FET). Generally, the school consists of many learners with vacancies in the teaching staff. The school benefits from the programme of school nutrition, meaning that it is a no fee school with a lower quintile.

3.2.4.2. School B

School B is a big school with a boarding facility. The school takes part in the programme of school nutrition. Learners of this school are coming from different municipality districts of the Eastern Cape. It is situated in a rural area of about fifty three (53) kilometres away from East London. The school consists of grade eight (8) to twelve (12) learners. The commercial and science streams are offered in the school. The school is performing well in the overall results of grade 12.

3.2.5. Sampling of the respondents within each case study school

The sample of the school consisted of the grade twelve learners studying mathematics which is one of the subjects where the learners suffer most. According to Gray (2004), a sample is defined as a small portion of the total set of objects,

events or persons that together comprise the subject of one's study since it is rarely possible to include all the population in the study. The sample consists of the focus group and the individual. Grade twelve respondents have been chosen because it is the exit point class in the FET band and the performance of the school is measured. The number of the respondents for both schools is shown in (c.f. Chapter 4, section 4.1.1).

3.3. NEGOTIATION OF ENTRY

Since the schools belong to the Department of Education (DoE) and the district, the researcher asked for permission in writing an official letter explaining the objectives and the intentions in doing the study. The researcher looked at sampling for this study which has used the minimum number of participants so as to have full control and a better impact on the set outcomes. A form of gaining access to participants is called minimization which is explained by McMillan & Schumacher (2001:401). Qualitative research uses small samples of people nested in their context and studied in depth.. According to Hui-Fang Chen et al (2010) the view is that, there is an advantage in minimizing the participants as there is a decrease in the total imbalance for all critical variables to achieve a better overall balance in a study by balancing multiple participant characteristics simultaneously. Minimization incurs costs in terms of time, complexity of administration, and potentially requires a computer programme to allocate participants.

In order for the researcher to have access to the participants, the researcher has formally asked for permission to be granted from the potential participants such as the Department of Education, the district office, the school principal, the parents of the affected participants and the participants themselves. According to De Vos et al (2002, p. 359) their study states that in qualitative research, the researcher is directly involved in the setting, interacts with people, and is the "instrument". Further, a written letter of permission from the researcher's institution, which is the University of Fort Hare (UFH), signed by the supervisor, was forwarded to the school principals as managers of the government institutions. The document in a form of a letter asked for the schools to be the sites for the study. After the permission was granted to use the schools as sites, respondents were approached verbally to tell them about the

study and later formal letters were issued. There were also the consent forms to be signed requesting their participation in the study. The form was read and the contents explained. The reason for this was to ensure their full knowledge and cooperation to avoid any possible resistance or tension when interviews were conducted.

3.4. METHODS OF DATA COLLECTION

The study collected the data from various sources and that is called triangulation so as to be able to determine its trustworthiness, According to Creswell cited from De Vos et al (2005, p. 361) it is stated that “triangulation is based on the assumption that any bias inherent in a particular data source, investigator and method would be neutralised when used in conjunction with other sources.” This, therefore, has caused the researcher to have an interview with the different groups of learners and to look at their portfolios to verify their responses.

3.4.1. Semi-structured interviews

The data was collected through the use of interviews. An interview is defined by Cannel and Kahn cited from Cohen et al (2000) as follows:

“... interviews involve gathering of data through direct verbal interaction between individuals. Interviews assist the researcher to work face-to-face with the participants so that the researcher can read their body language.”

It is suggested by the researchers Cohen et al (2000, p. 269) that when the interviews are used, the participants are mostly involved and become motivated to speak out their views and experiences. This is true in the sense that the participants were free to respond to the questions rather than writing answers down which might have spelling and grammatical errors. The researcher applied face-to-face contact with the participants and sought clarity where necessary. Probing questions were also used to clarify the areas of interest and get further explanations from the participants. Probing is supported by Patton (2002) as probes are used to deepen the responses to a question, increase the richness and depth of responses, and give clues to the interviewer about the level of response that is desired.

A separate room was used to avoid the interruptions that might occur in the middle of the interviews. During the interviews, the researcher used note taking and the voice recorder to capture all the data accurately. According to Patton (2002) it is stated there as follows:

“no matter what the style of interviewing is used , and no matter how carefully one words interview questions, it all comes to naught if the interview fails to capture the actual words of the person being interviewed”

The use of the voice recording assisted the researcher although it could not capture the non-verbal cues. O’Leary (2004, p. 169) suggests that “audio recording allows you to preserve raw data for review at a later date.”

3.4.2. Document Analysis

In this study interaction was done with the research participants in order to collect data and therefore it is so important that the variables will not be manipulated. The researcher looked for rich and detailed answers from the participants who made their point of view very importantly to the researcher.

Since data was collected through interviews, the advantages of using interviews as stated by Robson (2002, p. 275) are that interviews are capable of providing rich and highly illuminating, clear and easy material. It continues to say that the researcher is capable of using open-ended questions because they are flexible and allow the researcher to make a truer assessment of what the participant really believes and can produce unexpected and unpredicted answers. Kumar (2005, p. 123) defined interviews as “any person to person interaction between two or more individuals with a specific purpose in mind is called an interview.” In addition to that, Ryan, Coughlan & Cronin (2009, p. 309) cited from Goodman and Evans (2006) are of the same view that focus group interviews are a further form of interview; these are in-depth open-ended discussions that address a predefined topic of interest to the group and researcher. Gorden (1992, p. 2) concurs with other writers that interviewing can be defined as a “conversation between two people in which one person tries to direct the conversation to obtain information for some specific purpose.” In other words this

means that the researcher will also be using the unstructured questions which are more relevant and motivating to arouse the learners' willingness to give more required information.

According to McMillan & Schumacher (1997, p. 40) using the interviews will be of great value because interviews are characterized by three features which are as follows:

- Interviews were conducted with individuals and small groups of people to capture participants' perceptions on feedback they receive from their teachers and the problems they encounter in using the feedback.
- Semi-structured and open-ended interviews were used to provide participants with opportunities to describe and explain the most salient issues that cause them not perform well after the feedback has been given.
- Verbatim words and phrases from the interviews were analysed and used as data to illustrate the findings.

The researcher prepared a set of questions to be asked which gave guidance to what the researcher was looking for, but in the course of questioning there were some deviations from the guide due to statements made by the participants. Using the interviews were very helpful in making follow-ups and clarifications so as to get clear responses. Kumar (1990, p. 09) is of the view that interviewing is a commonly used method of collecting information from the people. The researcher interviewed the grade twelve learners with the lowest pass rates in mathematics. The necessary documents such as the test books, assignments or projects, class work books and the assessment records of the school of all terms were observed and used in the analysis of the report (cf. Chapter 4, section 4.5).

3.4.3. Focus group discussion

Firstly the researcher addressed the problem which is the background of the research, the intentions of the exercise (objectives) and the methods to be followed in order to achieve the objectives. Focus group discussion is one of the qualitative

research methods which consists of approximately five to ten participants guided through a set of designed questions. According to Cohen et al (1998, p. 288) are of the opinion that focus groups are different from individual interviews and group discussions because they depend on the interaction of participants within the group, the topic and the researcher's questions. The participants' response are recorded by the researcher to ensure that confidentiality is assured. The researcher explains to the participants that their responses will be used for no other purpose than the analysis and reporting of what was said.

The table 3.1 below explains how the focus group and the group of individuals of the two schools have been categorised

SCHOOL A		SCHOOL B		
LEARNER CHARACTERISTIC	Number	LEARNER CHARACTERISTIC	Number	Total
Consistently below class average grades in mathematics	2	Consistently below class average grades in mathematics	2	4
Consistently within class average grades in mathematics	3	Consistently within class average grades in mathematics	3	6
Consistently above class average grades in mathematics	2	Consistently above class average grades in mathematics	2	4
An individual learner consistently within class average grades in mathematics	1	An individual learner consistently within class average grades in mathematics	1	2

The researcher selected a sample of two schools which is not too large to avoid a problem of extracting neither a good and rich data nor a too small group to make it difficult to achieve data saturation. Learners from each of the schools were selected purposively from grade 12 classes. In each school there was one girl with consistently the lowest class grades in mathematics, one boy within class average in these subjects and a boy with the highest marks in mathematics.

This has assisted the researcher in using a flexible and pragmatic approach, choosing an appropriate number, least costly in terms of time, effort and money, a convenient and productive sample to answer the research question adequately. According to Denzin (1978, p. 7) in recent years there has been increased focus on rigor in qualitative research, where rigor is defined as the goal of making “data and explanatory schemes as public and replicable as possible”.

3.5. DATA ANALYSIS

Punch (2005, p. 226) states that data analysis consists of the components with a framework indicated in the Miles and Huberman Framework for Qualitative Data Analysis which are data reduction, data display and drawing and verifying conclusions. These components are explained as follows:

- (a) Data reduction occurs continually throughout the analysis. It is done through editing, summarising the data, coding and memoing and in association with activities such as finding themes, clusters and patterns.
- (b) Data display is to organise, compress and assemble information.
- (c) Drawing of data occurs concurrently with the data display and data reduction.

Terre Blanche, Durheim and Painter (2006, p. 321) are of the view that in qualitative studies there is “no clear point at which data collection stops and analysis begins”. Yin (2003) summarised it as a procedure for organising data into more manageable categories. In this study conclusions were drawn and verified throughout the actual visits to the sites. Meaning has to be attached to the collected data and it has to be done by means of codes such as tags, labels or names. Punch (2005) is of the view that memoing begins together with coding at the start of the analysis and points

towards new patterns and a high level of pattern coding. In this study all the data analysis steps were followed in analysing the data as early as from the interviews and the document analysis.

3.6. ETHICAL CONSIDERATIONS

The researcher was bound and forced by the research code of ethics. The researcher sought permission from the Department of Education (DoE) to collect the data from the learners of the school. The participants were assured of the most important guidelines of social science research in codes of ethics. This means there was a need for informed consent, accuracy, voluntary participation and confidentiality to be applied to ensure that the rights of the individuals were respected. This is confirmed by Denscombe (2002, p. 125) when he said, “the acceptability of social research depends increasingly on the willingness of social researchers to accord respect to their subjects and to treat them with consideration.” Schwardt (1997) is of the view that ethics comprises norms and values in our cultural society and further also explained it as “moral dilemmas arising from the issues of trust, confidentiality, harm, deception, consent, etc. In this study all these guidelines were observed.

3.6.1. Reflexivity

Reflexivity is critical to the conduct of fieldwork; it induces self-discovery and can lead to insights and new hypotheses about the research questions. A more reflexive and flexible approach to fieldwork has allowed the researcher to be more open to any challenges to their theoretical position that fieldwork almost inevitably raises. Certainly a more reflexive geography must require careful consideration of the consequences of the interactions with those being investigated. And the reflexive “I” of the researcher dismisses the observational distance of neopositivism and subverts the idea of the observer as an impersonal machine (Hondagneu-Sotelo, 1988; Okely, 1992; Opie, 1992). This is relevant to the study because the researcher plays a dual role as an official in the DoE and as a researcher of the study.

By the time of the start of the study, the researcher was working as a subject specialist in the DoE and became familiar with the curriculum programmes that the

schools implement. I therefore had to play a neutral role and avoid bias in conducting the study. On a different note Douglas Macbeth (2001, p. 35) defines reflexivity as a deconstructive exercise for locating the intersections of author, other, text, and world, and for penetrating the representational exercise itself. He continues to say reflexivity is recommended as a principal method for excavating new (anti)-foundations for the analytic and representational exercise. Reflexivity recommends an inquiry into the very possibilities of our unreflective knowledge and practices, and in this way, the reflexive move is an aggressive one for bringing more of an unsettled field into view.² According to Louise Ryan & Anne Golden (2006, p. 192) they describe it as a process that involves honesty and openness about how, where and by whom the data was collected and locates the researcher as a participant in the dynamic interrelationship of the research process.

In qualitative research some researchers experience difficulties as well as the opportunities that circles around reflexivity. Therefore, reflexivity is one of the characteristics of qualitative research.

3.6.2. Informed consent

Confidentiality is something that the researcher should exercise. Privacy is one of the most important ethics that one needs to observe when using qualitative research. According to Howe and Moses (1999, p. 25) privacy has an intrinsic value tied to human dignity and security and is distinct from its relationship to autonomy. Cited from Caplan (1992, p. 320), "privacy is a basic human need. Without privacy, it is not possible to develop or maintain a sense of self or personhood." Before the interviews could be conducted, I asked for permission and consent letters from the participants to be signed. Aims, time to be spent and expectations were explained to the participants as well as how results would be published. Ensuring anonymity and privacy was emphasized by the researcher. The researcher allowed the respondents to sign forms of consent. The principals of the selected schools were provided with the copy of the proposal and the research questions.

To ensure that the full protection and welfare of the participants was considered, the interviews were held in the premises of their schools in the place chosen and prepared by their teachers. However, due to the transport that one of the

respondents was using, I was asked to meet her at her home and conduct the interview in my car. I did not have a problem with that kind of arrangement. The researcher is aware of the confidentiality that should be applied in the study and was also observed through the use of codes and non-existing names attached to the respondents (pseudonyms). Guba (1990, p. 158) is of the view that the researcher has to be underpinned by three basic principles, namely, principle of mutual respect, principle of non-coercion and principle of non-manipulation. The researcher gave the participants an opportunity to choose to take part in the study or not. Participants were assured of uttermost confidentiality

3.6.3. Validity and reliability

In this study, the researcher ensured that the credibility and dependability were fully addressed up to the end of the research. According to Denscombe (2002, p. 100), he refers to reliability as the stability, accuracy and precision of measurement. The researcher has ensured that all the details for the process of collecting data and procedures taken in analysing the data are safely kept in the form of a document. Kasenga (2007, p. 35) viewed validity as important in research because it states whether an item describes what it is supposed to be. To observe this, for the collection of data I used the following methods: questionnaires, interviews and observations. According to Kasenga (2007, p. 36), the use of various methods of data collection is termed as “triangulation”.

3.7. CONCLUSION

In this chapter the researcher has successfully explained the research methodology, validity and its trustworthiness, data collection and data analysis methods in conducting the study. The objective of the study in this chapter was to describe the research design, approaches, population, sampling, instruments like interview questions and tape recorder. In the study all the necessary steps that had to be taken as the qualitative research demands were followed accordingly.

Chapter four deals with the analysis of the data and the presentation of it.

CHAPTER 4

DATA PRESENTATION AND ANALYSIS

4. INTRODUCTION

In this chapter the data is presented as it was initially gathered in the field through the semi-structured interviews and the document analysis which is investigating the perceptions of learners on the feedback they receive from the mathematics teachers in the schools of the East London District. The data was collected through the use of a tape recorder and scribed and later transcribed into written text.

4.1 DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

4.1.1 Distribution of interviewees by school and by gender

One-on-one in-depth interviews were carried out in two schools. The interviewee ages ranged between 17 and 18 years. Their distribution by school and by gender is given in table 4.1 below.

Table 4.1: Distribution of interviewees by school and by gender

School	<u>Gender</u>		Total
	Male	Female	
A	1	1	2
B	1	0	1
	2	1	3

It can be seen from the table above that a total of 3 learners consisting of one boy and two girls were interviewed.

4.1.2. The distribution of learners who participated in the focus group discussion is given in table 4.2 below

The in-depth interviews were carried out with a group of learners from school A and B. There interviewees were about six learners from school A and seven learners from school B. In both schools it was a mix of boys and girls ranging between 16 and 18 years of age.

Table 4.2: Distribution of learners who participated in focus group discussions by school and by gender

School	<u>Gender</u>		Total
	Male	Female	
A	4	3	7
B	3	3	6
	7	6	13

4.2 ORAL COMMENTS RECEIVED FROM THE TEACHER IN CLASS THROUGH QUESTION AND ANSWER SESSIONS

It has been argued that (c.f. Chapter 2, p. 9) feedback to learners can be given in various forms. One of them is oral feedback in class. Respondents were asked what they thought about comments from teachers in class. AL1 said:

If you happen to give a wrong answer to the question, the teacher will tell you that you are not studying because I have explained this before, you are not serious about your work. Then you become scared to participate in class next time in case you get it wrong again because she is shouting at you and you lose focus. (AL1, Dataset 1)

In the above quotation the teachers' comments appear to blame the learner for the wrong answer. This can be seen from the comments like '...you are not studying...' and '...you are not serious about your work...' This, as can be seen, discourages the learners and even intimidates them. Furthermore, this type of feedback acts as a barrier to learning. There is a sign of public humiliation when the teacher says '..... I have explained this before ..' and is shouting at you. If questions are asked they should open up a dialogue; some time must be given to learners to think; whisper to one another and their ideas can be invited in a form of a report. It is the duty of the teacher to listen carefully to those reports and a constructive response be given when something emerges. In the researcher's opinion, the teacher has explained the task but now the learners do not know it. It is the responsibility of the teacher to find ways of making sure that learners are assisted with the work they find difficulty instead of being ridiculed for not remembering the work covered. By saying this, the

teacher is depriving the rights of the learners in having the information to make sure that they remember what they have been taught.

Participant **AL1** above referred to discouraging oral feedback from the teacher; the experiences of **AL2** were similar except that the feedback this time was both non-verbal and verbal as can be seen from the words below.

There is no comment that you get from the teacher except the show of a happy face, but when you are wrong the teacher will get disappointed and begin to tell you that you do not care about your work because you are suppose to know this, I have taught you this before. (AL2, Dataset 2)

In Chapter 2 it was argued that the manner in which learners receive feedback is very important. The sentiment expressed by AL2 bears testimony to this fact. Non-verbal feedback which comes in the form of a facial expression and body language can be problematic because there is a possibility that it can be interpreted in different ways and may cause contradictions. Learners may not have the same interpretation as the teacher to this type of feedback. There is also a possibility that 'silent' feedback may be missed by other learners who may not be looking at the teacher at the time the feedback is given. The other point about lack of verbal feedback is that learners miss out on the opportunity to be publicly affirmed or acknowledged by the teacher as having given the correct answer. (An example could be, "That was a good point, Sara"). Such affirmation may have the effect of motivating other learners. The type of behaviour shown by the teacher here is also causing the learners to be unable to know whether the views they give are good or not. The teacher therefore must be very careful when using nonverbal cues and be aware of when and how to use this type of feedback to avoid not to be understood or misinterpreted as this always or may happen.

AL1 and **BL1**'s experiences about non-verbal feedback which does not guide the learner are more explicitly stated when she stated that:

When responding to the question the teacher does not correct you politely, if it happens that you have miscalculated or you got the answer wrong, she will refer you to her favourates... (AL1, Dataset 1)

There are two points that we get from the response above that 1) the teacher does not correct the task, therefore, leaving the learner lost, and 2) the teacher 'outsources' feedback to other learners. This can make the learner feel inferior and the favourites feel superior and become proud which can lead to conflict and bullying amongst them. It is argued in Chapter 2 (p. 13) that peer feedback is one of the most important strategies that teachers can use that assists most learners to get feedback. The way peer feedback is conducted implies that the teacher promotes other learners to be the sources of information to others. The learner loses interest in the feedback because the focus is not on her but to those who know most of the content.

The learner is looking for individual attention from the teacher and, unfortunately, does not get it. The feeling is that feedback is given to one group of learners hence they are called her favourites. The response indicated above means to learners that teachers showed unfair behaviour towards those who are not bright sparks in the subject, mathematics, by shifting the focus away from them and concentrating on those who do well. The teacher is so unbecoming, unsupportive, unapproachable and making fun of them when they cannot give correct answers.

The researcher is of the view that it is important that the teacher uses the peer feedback because learners understand each other, they work together, gain communication skills and become confident in speaking publicly; and most importantly there is an exchange of ideas that is creating critical thinking and a great sense of accountability. However, these groups should be carefully arranged according to their level of learning and understanding to avoid undermining one another. The researcher is of the view that the learners must be given a chance to organise themselves in the formation of groups; this will cause them to be proactive in seeking information from each other. From the above comment, the teacher does not seem to be interested in encouraging the poor performers to try their best; instead they become weaker rather than improving.

Feedback from tasks done in class can have adverse effects from those doing it, as **BL1** says:

The teacher will ask us to go to the board and calculate for the whole class, I panic a lot because other learners will look for the mistakes I will have and make silly comments and correct me, but the teacher will let you finish and show where you got it wrong and then explain what you should have done to get it right. (BL1, Data set 1)

The messages from the above quote imply that the student lacks confidence and panics fearing to make mistakes and attracting criticism from the classmates. The teacher waits for you to make mistakes and only corrects after you have made a mistake; this can indicate that he wants to see where exactly the learner misses the trend. The student loses focus and begins to get confused even in simple tasks as the classmates are expecting mistakes. Even if the teacher shows how this should have been done afterwards, it is not easy for the students to grasp and understand the correct method for calculations because he feels embarrassed already; concentration is lost.

An argument has been raised in Chapter 2 (p.17) that favouritism is also emanating when feedback is given in the classroom when the respondent says:

The teacher will go around checking only her favourates people and then goes to the board, she will not explain what is going on with the sum or task, she will ask where exactly you don't understand, she does not explain thoroughly. At times you cannot say where exactly your problem with the task is, but that is not addressed by our teacher (AL2, Data set 2)

The response indicated by one of the participants in the citation above confirms that there is favouritism that is taking place in this class. A particular group of participants does not get the same treatment that others are provided with by the teacher. The assumption is that the vocal tone of the teacher changes when it comes to the underperformers. This acts as an indication of making a comparison with other learners which can make those struggling learners feel they will never make it. It can also be predicted that the teacher is grading the learners and making final decisions

about them though learning is still in process. Further, it would mean that the teacher demonstrates an undesirable trait that is harmful to the learners. The unfortunate part about this is that this kind of manner portrayed by the teacher becomes a lasting memory to the learners and can destroy their future. Those [learners] who are favoured have a tendency of taking advantage of that. Generally, teachers tend to be more supportive and positive toward capable students, but the best is to try and keep the learners focused on the learning processes involved rather than on the evaluation process.

Apart from not guiding the learner, the teacher shouts at the learner that gets the answer wrong and becomes very cross with the learner.

The teacher gives you a shout and begins to ask you what is difficult in what is asked. This makes you feel not to like to do mathematics anymore and prefer to rather study Mathematics Literacy (ML) because the teacher for ML is totally different from the one we have for mathematics. We feel not to communicate with her.... in a very harsh way to her favourites to assist by teaching you to get it right. (AL1, Data set 1)

My teacher's comments do not help me at all because they do not make me feel fine, instead it makes you to look funny at other learners in class then you begin to lose focus and your self esteem is lowered and sometimes taken away, this then affect your marks when the formal task is done (AL1, Data set 1)

The above response gives an indication that the learners are being discouraged and this makes the learner ‘...feel not like...[doing].. mathematics...’ Learners are ridiculed by the behaviour of the teacher. It could also mean that learners develop negative attitudes towards mathematics due to teacher's attitude and behaviour towards them. Although the respondents did not elaborate further, it can be assumed that learners feel excluded from the classroom of mathematics. If the teacher shouts at them when they could not give the correct answers, it would mean that the teacher does not vary the teaching style so as to accommodate the range of abilities of the learners. The responses further could mean that learners gained a negative attitude towards the subject and the teacher. It is evident that they become afraid even to ask questions for clarity as they avoid embarrassing themselves and looking stupid to others. The assumption is that the teacher does not give feedback amusingly and endearingly, and therefore does not interest learners.

Learners also feel that mathematics is not for them rather they would prefer Mathematical Literacy (ML) but given a chance and proper feedback all learners can do mathematics. The researcher's view is that if learners do Mathematical Literacy (ML) not because of choice but due to the bad comments they get from the teacher it would mean that they will not be able to do careers that require mathematics as one of the subjects. Those learners will never reach their goals and the reason will point back to their high school mathematics teacher. The fact that their marks for formal tasks are affected is an indication of examination failure at the end of the year. Even though they did not say it aloud, it could mean that some learners, when they lose self esteem, they do not even opt for Mathematical Literacy as they undermine it: and decide to drop out as they foresee failure at the end of the year. This is contrary to the purposes of feedback which as it is stated in Chapter 2, p. 1 that feedback has been defined as information provided by an agent (e.g., teacher, peer, book, parent, self, experience) regarding aspects of one's performance or understanding.

What is taking place in school A is totally different from what is happening in another school. The experiences of **BL1** were, however, different from those of **AL1** as stated in the quotation below:

His comments boost my self esteem and try to put more effort and have to make sure that I get it all right all the time. This encourages me to participate in the class discussions. (BL1, Dataset 1)

The point that **BL1** is trying to make is that the feedback they are receiving from their teacher acts as a motivator when the learner says '*...it boosts my self esteem...*'. When a learner's self-esteem is boosted, it encourages the learner to participate in classroom activities. It leads to hard work and better understanding in the subject. In this situation, all comments and criticisms from both the classmates and the teacher are treated and taken positively as compared to **AL1**.

The citation below for **AL1** does not give an indication that the respondents submit their written work late but even though they do things according to the stipulated time, they do not get any feedback other than marks in their reports to which they cannot refer back for improvement in the next task. It is evident that from the oral feedback they receive they are not given a chance to scribble down what they think

they need to jot down for reference. The assumption is that there is nothing wrong with verbal feedback but what spoils it is the non-negotiation of how it should be done as they become embarrassed in front of others. It must be discussed whether this should be on one-on-one in the classroom or outside or maybe in smaller groups according to which questions are not tackled or answered well. It is also disclosed that the feedback is given at a very fast speed because of the number of the learners in the classroom and the assumption is that out of that there is less or nothing gained by the learners for that particular kind of revision.

There are no comments written in our scripts except a mark, we get them verbally in class in front of others. In fact what she does, she calls your name and reads the mark you got at the front. If you happen not to have performed well in the test, she will begin to tell you that you are not studying and you are going to fail at the end of the year. The teacher will go through the script with you orally in the class and bear in mind that you are not taking any notes for the wrong answers and you are unable to capture all what she is saying to you and the pace is fast and the queue is long... (AL1, Data set 1)

In the quote below, it is assumed that the teacher does not demonstrate any passion to help the learners learn from their mistakes. Again, the teacher is aware of the difficulties that her class is having but she does not provide the support the learners need.

If you are slow in understanding what she is explaining she will continue with the shout and then you begin to lose focus, as she explains she gains anger and will call the next one and leave you half way and you must remember that you are not writing anything down as she talks to you, you have to keep all that in mind, and this does not mean that you understand all what she is saying. (AL1, Data set 1)

The respondent's response from the below quote demonstrates that learners are not impressed by the verbal feedback given in front of the others; they feel undermined, humiliated and deprived of their rights in getting what is due to them, that is, the memorandum; they do not concentrate at all. It is evident that learners feel that the verbal feedback they get is done whilst they are standing and they are unable to note down so as to refer to what has been said when they want to study; by not getting a memorandum the teacher is keeping the information to herself; it means learners cannot confirm whether their answers are right or wrong if they do not have a memorandum when practising from the previous question papers. It is indicated by

AL1 below that they are not able to recall all the verbal comments of the teacher. In fact, the participants are not denying the fact that the teacher provides the feedback but they feel that they do not benefit from what is given in the classroom.

It is assumed that they are feeling being punished for not performing well in the task. It is evident that the respondents have a conscience that they are responsible for their studying but the challenge they are faced with is to confirm whether they are practising the right thing because they do not have something to refer to.

... the mere fact you got it wrong you had a problem with it, now how do you begin to understand without writing in the book so that when you are at home you are able to have a look at it and try to practise to get it right next time. The teacher does not give us a memorandum after the test is written and marked and yet she expects us to pass. Of course the time will not be enough for the whole class and when the period is over, for those who have not been called yet they have to go to the staff room to see their marks and hear what the teacher will say, we do not like that because now you will be shouted in front of other teachers and look stupid and lose focus (AL1, Data set 1)

It is confirmed from the above quote that for some learners the shouting shifts their focus; they become distracted and end up not listening to the teacher at all. Further, learners run away from the individual feedback because they fear to be an embarrassment to other teachers in the staff room. As it is indicated in the citation above, that the respondents get the comments verbally; it gives the impression that the learners are not happy about this method of feedback that the teacher uses. From the above response, the fact that the comments are in a verbal form whether the learner has passed or failed; it could mean that obviously they cannot recall everything the teacher has said. This indicates that those who struggle with their work will continue to perform poorly and those who try their best will not be given a chance to improve.

The researcher's view is that if the teacher fails to give feedback this might lead the learners to have mixed messages about their own abilities which can lead to lack of trust in the teacher. It is also evident that the learners gain negative feelings about the teacher which emanate solely from the marks obtained.

The researcher's assumption is that there are signs of discrimination between the high and low achievers. The teacher is not looking at developing all the learners but only those who seem to be promising in the subject, mathematics. The statement given by the respondents highlights that their expectation is that the teacher should give guidance in terms of what they do. The fact that the teacher does not point out the learners' strengths and advises how they should be developed, those learners will struggle or not improve at all.

..., she does not point those learners who are not her favourites to say something in class. The poor you perform in the class the more the ignorance towards you and she concentrates to those who are seem to be doing well in her subject. (AL2, Data set 2)

The quote above could demonstrate and emphasise a point that those who do better in class are being preferred and protected and regarded as friends to the teacher; the poor performers are not looked at and that may cause them to remain knowing very little or nothing as they are not getting any assistance from their teacher; instead the assumption is that they get more criticism for incorrect responses they give. It could be argued that low achieving learners feel that their teacher is interacting more positively with high achieving ones more frequently, allowing them more time to answer questions. It might appear that most learners are losing hope to continue studying mathematics; as a result they perceive mathematics as the most difficult subject, and they will never know or master it. The attitude of taking no note that the learners talk about the above quote of **AL2** might develop hatred towards the good achievers, the teacher and the subject; some learners will become demotivated and decide to drop out of school. For the learners who experience a learning barrier in mathematics, they see the teacher's behaviour as being demoralising to them.

Some learners might feel that they are better off without mathematics in their lives; others will think that to do well in mathematics is not important in their future. It could be interpreted that the teacher portrays a positive attitude towards the best performing learners and does not want to be associated with the low achievers; forgetting that they are all her students. It appears that the teacher does not take cognisance of the fact that if there is a larger number of low achievers than those

who perform better This will have a negative impact in the class average of her subject.

According to the above quote of **AL2**, it can be interpreted that the teacher seems to forget that learners who are not doing well need the individualised feedback sessions which can be arranged so as to take them through to try to close the gap with those doing better in class. This additional support could motivate them and develop their self esteem which might cause them to keep on trying to strive for improvement.

It is very much impossible to use the comments you are getting from my mathematics teacher because they are not written down, those comments that you manage to collate on your own are not enough, it is here and there because the pace was fast and you get lost on the way. (AL1, Dataset 1)

It is discussed in chapter 2, p.19, that timing of the feedback plays an important role in the subject. In most cases the tempo and the timing have to be very much considered. In the quote above, it is evident that **AL1** would love to get the feedback as they value it, get prepared and use it for other upcoming tasks. It is assumed that they feel there is a big gap between what they can collect and what they could be provided with. Based on the above response, it could be seen that when the teacher gives feedback, the learners do not get all the information because she is very fast in her explanation. Furthermore, it could mean that the learners also struggle to take their own notes and end up losing information they might have collected from the feedback due to the pace of their teacher. The assumption may be that, although the teacher is giving the feedback orally to the learners, it does not make any difference to what they do not know because they are not writing down any notes for future reference.

The citation might also imply that learners are being disadvantaged by the teacher as a lot of information is provided orally. It may point out that even though the learners would like to take notes down to refer to, it is not easy to do so because they are left behind due to fast pace it is given; the teacher is not considerate of those who do not catch up quickly. Teaching and learning are not fully promoted; instead the underperformers are seen to be discouraged and learners with those who experience learning barriers are completely not catered for. The other point **AL1**'s response is highlighting could mean that there is no chalkboard summary done by the teacher or any hand outs issued to assist learners to study when they

are on their own. Aside from the feedback the teacher provides at a fast pace, it is assumed that they [learners] are struggling in understanding the work; they get more confused and end up gaining nothing at the end of the lesson.

The researcher's suggestion is that it is not that much important to the teacher to speed up in order to finish the planned work for the day or week, but rather make sure that what you have planned to teach is understood by at least above fifty percent of the learners in the class. The reason to say this is that if you leave your learners behind, it will be a waste of time as they cannot move when you assess them on the covered work and they won't succeed in their future careers. The researcher believes that the high school work will be required as a basis when these learners are in a higher institution pursuing qualifications.

The language issue in chapter 2, p. 17 is discussed as a contributing factor in the process of receiving feedback especially in remote rural areas. The participant was asked what she thinks is the problem when the teacher is giving an explanation to them. The response was as follows:

Our mother tongue is not the same as our teacher, she speaks differently from the way we speak English, her pronunciation is far different from ours if the word is not said right we will not understand what it means, we do not have time to write them down, we can't refer to the oral comments and won't be able to remember as you learn more subjects and have to focus to other teachers. (AL2, Dataset 2)

It can be seen from the above quotation that the learners are experiencing a challenge with the accent of the teacher which is adding to the language barrier as English is their First Additional Language (FAL). The assumption is that learners get frustrated because both the teacher and the learners are foreign to the Language of Learning and Teaching (LoLT), which is English. It could mean that learners feel that the teacher's pronunciation of words differs from theirs and it worsens the situation. Through the researcher's observation most teachers in school A are blacks and their mother tongue is isiXhosa, the assumption is that when the learners do not understand they use code switching in the subjects they teach to clarify the point. has not been recorded that most teacher's. The researcher's view is that code switching is one of the allowed strategies that a teacher can use when learners are

struggling to understand the lesson, but in this case the problem that the participants are experiencing is the teacher's mother tongue which is different from theirs.

The citation may further demonstrate that the accent of the teacher is disadvantaging the learners who struggle most in the subject and also does not credit those who seem to be good learners in class. Though the respondents did not say it, the assumption is that learners are of the view that the teacher moves along with those who manage to get her work done right; those who cannot do well are not taken into account. Based on the above quotation of **AL2**, it might mean that the way the teacher is talking English in pronouncing the words is what makes them struggle to understand the lessons; and what is making things worse is that the teacher cannot use code switching in her teaching at all.

... she will refer you to her favourites asking them to give the answer and then add by explaining to them what I should have done instead of focusing on me who has a problem with the task". (AL1, Dataset 1)

According to the citation above, it is evident that when the learner gives a response to the question, the teacher does not confirm the answer by saying "Yes, it is right" or "No, it is incorrect" but will shift the responsibility by outsourcing the feedback to other learners to respond and does not explain anything other than summarising at the end. In Chapter 2, p. 13 it talks about the peer feedback which plays an important role in the subject with the potential of reducing the workload of the teacher, though it has got its own challenges in the implementation which is not satisfactory.

When the learners were asked what they do not like most in the teacher's oral feedback, they responded as follows:

... she is generalising, and then talks to the whole class as if others have done the same mistake, (AL2, Dataset 2)

According to the above quote, this can be interpreted as that the teacher does not give feedback according to their responses and could mean that they want their work

to be recognised and be taken through individually in order to know where exactly they have made mistakes instead of having generalisations.

The quotation below could be interpreted that the approach of generalising that the teacher is using does not make the learners feel comfortable. It could be argued that the teacher does not communicate with them and show what is not done well in the task, what was expected of them to do and what they should have done in order to get the answer right. The quote could also mean that the teacher does not identify the common errors made by learners and give advice to address them. As it is pointed out from the citation below that the teacher gets angry, it can be assumed that some learners become scared, others lose focus and the rest get angry too. The statement below could also be argued that a teacher who has good relations and a better understanding with the learners will seldom get irritable with the learners. This suggests that the teacher should retain his or her anger within him/herself for most of the time. Based on what **AL1** has said, it is evident that the teacher does not have a connection with the learners and there is less communication between them and no proper guidance given where necessary.

... we do not like the general comments she makes and yet our mistakes are not the same... why is she always angry with us ... (AL1, Dataset 1)

The case is different from what has been said above. It emanated from the interview that the teacher is very supportive to the learners and gives guidance throughout the lesson as expressed by **BL1** below. Data also shows that there are times when the teacher gives feedback that helps the learners get direction. This is evident when the comment says that,

If something is wrong he is very much honest to tell you, if it is something he taught us before he will get straight to the point and explain what you should have done. (BL1, Data set 1)

From the above quote it further transpires that learners are happy with the teaching style that the teacher uses. The implication is that thorough explanation is implemented step by step for the benefit of the learners. It is also proven that the teacher for this group of learners cares a lot about what is happening to the learners. He does not waste time but makes sure that the period is spent wisely and gets the

learners to understand what needs to be done and what to do next time. The assumption is that by offering feedback to all of them at the same time, the teacher is making them feel important and honoured and thereafter he develops it further in smaller groups or with individuals. Furthermore, from the **BL1's** response, it indicates that another good method of giving feedback to the learners is the personalised verbal feedback. Most of the time learners are looking at and prefer personalized feedback. This could mean they want information that is specifically related to what they have done wrong and how they should correct it in order to improve. The demand for individualized feedback is very strong.

In support of what is said above, it is depicted from the quotation below that the teacher engages all the learners fully, equally and guides them throughout the lesson.

The teacher will ask us to go to the board and calculate for the whole class, I panic a lot because other learners will look for the mistakes I will have and make silly comments and then correct me, (BL1, Dataset 1)

The response given above proves that the method which is used by the teacher for the group of learners in school B is liked by the learners and encourages them to be more interested in the subject; as a result the implication is that they spend more time studying mathematics. This is totally different from what is done in another group of learners at school A. This might mean that learners feel that their teacher is always responding positively and is very willing to give help when he has to assist in class with school work. They are very comfortable with the approach used. An argument in chapter 2, p. 18 cited the functions of feedback as directive and facilitative. The fact that the teacher asks the learners to do the work on their own under his supervision is making them to concentrate, pay more attention, listen carefully and gain confidence as they do not want to disappoint him and avoid getting embarrassed in front of their classmates. This was confirmed by the learner from **BL1** group by saying:

His comments boost up my self esteem and try to put more effort and have to make sure that I get it all right all the time. (BL1, Dataset 1)

The quotation above indicates that learners are of the view that the positive comments coming from their teacher keep them motivated. It further explains that

the lesson is delivered in an appealing way. Learning in the mathematics class is enjoyable and satisfying; self-motivation is being developed.

According to what is in the literature (c.f. Chapter 2, p. 8) in giving feedback learners know exactly what was required in the task and effective re-teaching takes place at the same time. The response from the respondent above shows that the method which is used by the teacher is causing the learners to be fully engaged in the tasks given. It is implied from the quote given by **BL1** that the teacher interacts more often with them and uses a good approach in trying to correct their wrong answers. This indicates that this type of feedback is very important for the learners because it motivates them while they are busy in the classroom and boosts their morale to make them work harder and share their views with other learners. It could be interpreted that involving the students in a one to one contact is another good approach of making sure that they clearly understand and quickly grab the content.

From the researcher's point of view there are learners who will never take part in the class discussion because they are shy; therefore, an individual contact session gives them an opportunity to directly interact with the teacher and find clarity on areas that were not clear. During the interviews, there were respondents of **BL1** who gave evidence that peer interaction plays a key role in learning; it helps increase student involvement, improve problem-solving and communication skills and enhances student achievement. The citation from the respondent below agrees with this by saying:

You first have to identify the problem you have and in which part of the work, for one learner who came to him and ask for clarity, The teacher asks for a one to one contact because others do not speak in class they are shy. I choose one of the students and ask for help. He also believes in one-to-one consultation because he wants to accommodate even those who are shy to ask or speak in the class room. (BL2, Dataset 2)

The quote above gives evidence that there is a feeling that some learners receive constructive suggestions from peers and use them to improve their performance; but the fear may be the quality of peer feedback. From the same quote above it could mean that some learners are of the view that there are learners who feel good about the approach of the teacher, but there is also another group which prefers to talk to

another classmate than to be with the teacher alone. Interpreting the quotation from above the teacher is focusing on the level of the task, motivation and learning in order to improve learner performance and get good results. It can also indicate that the teacher is taking into cognisance that learners should not be left behind. It is evident from the respondents that the teacher wants them all to understand the work in order to perform better and not get bored with what is happening during his periods.

As we are calculating on the board he will say something or sometimes when he is doing a new chapter as he explains we will ask questions when needs be and when we do not know the answer he repeats what he has said to make sure that we understand and does not leave us behind. (BL2, Dataset 2)

From the above quote the impression is that the teacher clarifies and tries to simplify the content to the learners to make them understand the complex areas of the work. The citation also points out that it means the teacher does not leave them behind; he keeps on checking through questioning and, if the response is not good, he further explains to make sure that they all get it. It emanates from the interview that the teacher is building up the learner's self esteem; in return they strive to succeed no matter how difficult the work is.

To sum up, how oral feedback is given in school A does not help the learners at all. Learners complain a lot about how their teacher behaves when she has to give feedback and she reacts strangely when one asks her to repeat a step in the calculation of a task. The pace that the teacher uses gets the learners lost because she is very fast and does not want to be stopped or slow down.

In another school the teacher wants to make sure that all learners understand and they are fully involved in the task. This makes them pay more attention to the teacher and encourages independent learning. The teacher allows the learners to make an appointment to see him at depending on the available time in his schedule. Learners of this school are happy with their teacher and are trying by all means not to disappoint their teacher.

4.3. WRITTEN FEEDBACK ON ASSIGNMENTS AND TESTS

The literature in Chapter 2, p. 14 suggests that written feedback should be specific enough and provide constructive comments so as to make a difference to the learners. This comes to the assumption that the teacher should read and make written comments. However, in the case of one learner, such a practice did not appear to take place. It is said that:

You will never find any comments in the work book and therefore there is nothing to refer to when you are alone at home and want to remind yourself about something you did in class. Also the teacher does not even look at what we have written in our homework books and therefore we see no need to do the homework. (AL2, Dataset 2)

According to the above quote, the points are: learners are deprived of an opportunity to be told what needs to be corrected in the work they have written. It indicates that the teacher does not consider the purpose of giving feedback and how important it is to the learners. Learners are not shown ways in order to improve or the strategies to tackle the challenges of their work, i.e. their strengths and areas where improvement is necessary. Learners need to know what they have done well.

The citation from **AL2**'s response also demonstrates that the learners are expressing their feeling of being frustrated about the lack of written feedback. The failure to get comments from the teacher is causing them [learners] to be unable to know the sums that are done well. Further, the quote above explains how they so wish to get feedback from their mathematics teacher so as to be able to refer to it for revision purposes, but they are unable to do so; as a result they struggle a lot when they need to study at home in the evening. Another perspective can be seen from the words like "...there is nothing to refer to". This clearly indicates that they are desperate to get the feedback but the teacher is less interested in the work he/she gave to the learners. This is expressed by **AL2** as they mention the words like "...she does not even look at our books". Therefore, it could be questioned how the teacher is going to give feedback if he or she has no clue of how learners have responded to the task?

Even though it has been argued above that the teacher does not mark the homework books, the data below proves that there is also a problem in the marking of the assignments and the returning of them. This is disclosed by **AL1** when it is said that:

I cannot say there are comments written in our assignments because the teacher never returns them back. When we ask how we have performed, our teacher will tell us that we have copied the work. What we do when we are given an assignment, we form up groups and discuss the task and put in flesh on what we should write about, then we go and write, surely some answers will be the same, but when we try to explain to her ,she does not want to listen to us except for the word, copying. Funny enough we will have the marks that we see during the term. (AL1, Dataset 1)

The quotation above demonstrates two meanings in that learners do not get their assignments back and, when asking the reason, the response is that they have the same answers meaning they have copied the work. This could be interpreted in different ways. If they have copied the work, then where are their assignments so as to see those comments? It has been disclosed earlier on that the teacher has her favourites [better performers] to whom she refers. The interesting part and a concern is why are their assignments not returned? Does that mean they have also copied? In that point it can be assumed that the work is not marked at all hence it is not returned. Another assumption could be that the teacher does not consider the learners' efforts in finding the answers to the work given and the time spent on it. Another point indicated from the above quote is that learners are interested in knowing how they have performed in the assignment, that is, did they answer the question well; if not, what could be their problem and how could it be corrected? There is also an implication that the teacher has forgotten that learners need to be evaluated individually and as a whole class to determine which of them needs extra help and the areas that have to be recovered. The learners here will not be able to know their strengths and weaknesses and no advice will be given to help them improve their performance. Moreover, if feedback is not given, the learner might assume that he or she has no areas for improvement.

More so, this may indicate that the teacher does not consider other ways of marking such as using a rubric or a marking chart in order to reduce the workload as these types of marking provide details on how to go about the task. In the end the marking

will be much easier and smarter for her. In addition, when using a rubric or a chart for marking, the learners are able to know in advance as feedback and outcomes are provided in advance in the table. The significance of marking is to give support to further learning rather than to have marks. That is why comments are also important – it is worse and shameful to the teacher and discouraging to the learners that the written work is not returned. That is why the learners believe that their work was never marked.

On the other hand, another response given by **AL2** reflects a concern about the marks they have in their reports, yet they are told that they have copied and, therefore, deserve no marks. It is as follows:

We do not receive our assignments back, when she is asked where they are, she will say we have copied the work, but funny enough we will have marks in our reports. (AL2, Dataset 2)

To draw from the above citation the assumption is that it implies that the teacher is experiencing a barrier with the marking of the work and decides to allocate only the scores so that learners can have a term mark. It may also mean that the teacher does not consider the fact that feedback can be used to empower the learners as well as be a form of self-regulation to them. This may also mean that the teacher does not consider what the literature suggests in (c.f. Chapter 2, p. 10) that feedback can be used in various ways, such as for motivation. The above response could demonstrate that the teacher is more concerned about the mark schedule than to capacitate the learners in the content. Further, it could mean that the teacher does not do error analysis which specifies the type of errors that have occurred in their work so as to come up with a planned feedback. The implication could be that the appearance of marks in their reports means nothing to them as far as feedback is concerned. Moreover, if feedback is not given, the learners might assume that there are no areas of improvement that need to be looked at.

Interestingly, it is not indicated in the citation above that the teacher has asked for their draft work so as to say the copying was picked up at the initial stage of the work; in other words, the in-task guidance stage which comes before the final submission. This, therefore, might mean that the learners were deprived of an opportunity of being monitored in their work.

I cannot say there are comments written in our assignments because the teacher never returns them back. (AL1, Dataset 1)

The literature given in Chapter 2, p. 10), argues that feedback can be used in various ways, such as motivation that makes the learners work harder and helps them to understand their content better so as to improve their performance when feedback is given. If, therefore, feedback is not given at all in their assignments as is the case in school A, it implies that nothing will be assisting them in guiding what they have written. The interesting part is that, though they are told that they have copied the work and therefore do not deserve to get marks, the marks appear in the term schedule and report. This is questionable: What does this imply? Does the teacher look at the work or it is just the allocation of mark to get a term mark? The teacher does not consider the fact that feedback should be used to empower learners as self-regulated ones. It should, therefore, be suggested to the teacher that feedback is the result following the learner's action and to reinforce the learner's behaviour.

There are no comments written in our scripts except a mark, we get them verbally in class... The teacher will go through the script with you orally in the class and bear in mind that you are not taking any notes for the wrong answers... (AL1, Dataset 1)

Based on the above response, it could be interpreted that learners are not interested in nor happy with the mark only; they want the teacher to account for the points they obtained.

There is an implication that learners seem to understand that it is important to take notes down when feedback is given so as to be reminded of what has been said in class. This is confirmed by the words of **AL1** who said: "*the mere fact that you got the answer wrong you had a problem with it, now how do you begin to understand without writing in the book so that when you are at home you are able to have a look at it and try to practise to get it right next time.*" The assumption is that they know that if they are not writing down the answers that the teacher supplies, they will not be able to refer to them when they need the information at a later stage for study purposes; that will ease their revision when they are stuck somewhere in the middle of their discussions. They also show signs of panic as the teacher leaves them behind.

The teacher does not give us a memorandum after the test is written and marked and yet she expects us to pass. (AL1, Dataset 1)

The above response proves that learners are aware that the formal tasks such as tests are meant for them to practise and get exposed to various kinds of questions in preparation for the final examination; despite that the teacher does not give written

feedback to the learners. It could be seen that there is also no provision of a memorandum for them to refer to and which provides the correct answers in order for them to know what they should have written; moreover, they are frightened of failure as they know its implications. It sounds like despite the teacher's understanding of giving feedback, he does not seem to value the importance of providing feedback after the test has been given. It can be seen from the response that they [learners] show recognition that in the task given they know that they have to pass it, but the challenge in passing could be that they struggle to get answers right because there is nothing put on the table to assist them to overcome their challenge.

As the respondent states in the above citation, it gives evidence that there are no comments written. This confirms that the teacher has just put a tick or a cross next to the correct or incorrect answer instead of giving guidance so as to assist the learner to improve. There is evidence that the teacher gets bored and frustrated when the learner takes time to understand what she is explaining. This is confirmed by **AL1** when it is said that *"...If you are slow in understanding what she is explaining she will continue with the shout and then you begin to lose focus as she explains and this does not mean that you understand all what she is saying."* The assumption is that the teacher show signs of self centeredness and selfishness as she might think that it is a waste of time to repeat the same thing and forgets that teaching needs patience because learners' abilities and pace in learning are not the same. Further, from AL1's response this could mean that the learner will get lost worse when feedback is unfinished. This is confirmed by **AL1** when pointing out that *"... she gains anger and will call the next one and leave you half way and you must remember that you are not writing anything down as she talks to you, you have to keep all that in mind."*

An interesting approach of giving feedback in school B, which is different from the one mentioned above, is highly appreciated by the learners. This notion was supported by the respondent **BL1** when it is said that:

He [teacher] writes corrections on the side of the wrong task to show how you should have done it. (BL1, Dataset1)

The interpretation of the above statement is that though the teacher gives them the written feedback each learner is given an opportunity of looking at his or her

mistakes closely and understands exactly where the problem is. It is also proven from the observation of their portfolios that the teacher wants to make sure that learners are getting the feedback to practice the work and get the answers right.

Written feedback with specific comments on errors is suggested and it is found that teachers should make a difference when they provide constructive comments to students (c.f. Chapter 2 p. 14). When the respondents were asked what they do not like about written comments, here is the response BL1 gave:

... says I have taught you this before how come you do not know the answers now, I feel embarrassed for not remembering it. (BL1, Dataset 1)

This quotation above gives evidence that learners do not feel right when the teacher uses strong words when talking to them after they have provided wrong answers. The understanding could also be that the teacher gets frustrated when learners are not doing well because this has been covered already. The assumption is that the teacher expects the learners to know the work all the time and does not like to repeat the same thing time and again. It could also mean that they are not benefiting from the feedback that the teacher is supposed to give. The interesting question that can be asked is What makes the learners not to know what has been taught? Was the lesson good enough to be remembered in the near future? This becomes different from what the teacher in school B is doing as it is quoted below that:

There are corrections we do that we got from the teacher, we are able to refer back to them when we got stuck with our work and use them (BL1, Dataset 1)

Based on the above quote, the assumption is that the teacher's written comments are of help to the learners and they are easily reminded by going back to their books and reading the comments when experiencing a problem so that they can move on with their work. It may mean that the teacher's comments are welcomed by the learners hence they think of going back to their books, look at what has been suggested and this then assists them to carry on and do the task.

For an example if the comment says, explain or evaluate, I just go to the teacher and ask what it means so as to get a better understanding of what I have to do about it. (BL1, Dataset 1)

The quotation given above proves that the learners read and seek clarity on the comments provided by the teacher to understand what is required to be corrected. The assumption is that there are good relations between the learners and their teacher; the teacher is easily approachable, is always willing and ready to assist his learners. They [learners] find the comments very helpful because they are directly related to the work they have done rather than the situation with those [learners] in school A where the feedback is presented to the entire class. Arising from what **BL1** said above, the mere fact that the learners go to the teacher for clarity indicates that they like and appreciate the way feedback is conducted; they use it to improve their work, and they find it motivating. In the above quote it could also be interpreted that learners show signs of self determination in this regard whereby they are enthusiastic to read their comments. The impression is that these learners find the comments relevant to their work as they can be used to improve their performance.

Comments are not useful if it is the same kind, it does not encourage me. If marks are 38/40 and 39/40 and the comment is the same, this makes me crazy because the marks are not the same and I expect a better comment like outstanding. (BL1, Dataset 1)

From the argument which is given by the respondents of school B above, it differs from the one in school A. According to what **BL1** is saying, this quote points out that the learners are more concerned about the mark and if it happens that they find the comment to be the same yet the marks are slightly different, they become very unhappy about it. This could mean that the learners worry much about the comments the teacher writes. This therefore might say they read the comments carefully and do not expect the same comment when they have obtained different marks. Another implication in this quote can be that there is competition amongst the learners as to who scored better marks than the other and they boast about it.

Furthermore, it can be interpreted from the responses given above that some other learners would appreciate even if the comment is bad as long as the comment is referring to the problem they have in their work; they want to hear it and to look at what suggestion is given so as to rectify it. The literature in Chapter 2, p. 15 states

that feedback can be negative but should be supported in order to give positive outcomes.

The fact that the learners do not get any written feedback from their teacher is a reflection of a serious challenge which will cause them to lose direction. It is completely impossible for them to refer to their marked tasks. This, therefore, defeats the importance of feedback in the school A and retards any signs of improvement in the subject. Yet Chapter 2, p. 2 suggests that feedback can be effective if it directs the students to reconsider and causes them to revisit the task so as to enhance self-efficacy and self assessment for the purpose of improving.

4.4. CATEGORISATION OF THE DATA ACCORDING TO A, B, C AND D

The foregoing section shows that learners generally felt that the oral and written feedback they received was mostly not assisting them to learn. Learners' perceptions are further analysed according to Timperly (cf. chapter 2).

The data presented above shows that some teachers know the importance of giving feedback to the learners even if the task is not formal, while others do not take it seriously. The responses below show evidence of whether or not the teacher explains to the learners what is required in the task before they can respond to it and whether the learners understand what is expected from them. Some of the information gives an impression that, when the teacher gives feedback, learners are guided throughout and understand what needs to be done in the work they are given. The information, therefore, is categorised according to their responses. The categorisation is divided into four sub-sections and designed according to what is suggested in Chapter 2, p. 8 which is as follows:

- (a) Category A are the comments that confirm that the learner has understood the task.
- (b) Category B are the comments that guide the learner on how to perform the task.
- (c) Category C are comments that help the learner check whether all the tasks have been done.
- (d) Category D are comments which help the learner self-evaluate.

4.4.1 Category A: comments that confirm that the learner has understood the task

It emanated from the interviews that the mathematics teacher in one of the schools unpacks the task so that the learners can know how to respond, as expressed by **BL1** that:

Our teacher will ask you to explain to the whole class how you arrive to the answer and wants us to be positive all the time because it is a challenging subject (BL1, Dataset 1)

The above citation could be interpreted in a manner that the teacher is always making sure that learners are not left behind when the lesson is given so that when they have to write a task, they know exactly how to respond to it [task].

According to the quotes given below there is an indication that the teachers have explained the task before the learners can work on it. It is evident that the teacher monitors the learners whilst they are busy with the task as quoted by **AL1** that, "Our teacher will go around the class and check what we have written in our books." This might also mean that guidance is provided so that the teacher can pick up the mistakes they make at an early stage and make an intervention. When learners are asked to explain how they got to the answer, it helps a lot because those who were in the dark, felt confused and could not follow what was going on will now be able to understand.

4.4.2. Category B: Comments that guide the learner on how to perform the task

It is always important to remember that when the task is given, it needs to be discussed first so as to ensure that learners know and understand what they have to do. This helps the teacher to identify the areas that need to be revisited and re-emphasised when the feedback is given. In (c.f. Chapter2, p.10) the idea of interacting with the learners all the time is supported because it ensures that everything that is taught is clear to them. The responses below confirm that an explanation was given when the learners could not do the task correctly even though an explanation was given before they started to work on the task

The teacher will tell you that your answer is wrong and will show you where the problem is so that you get it right next time. (BL 2, Dataset 2)

As another way of looking at the learner's work, the teacher sometimes sits with their books and marks their task. He is able to give guidance in their task books so that they can pick up the challenges they have in the work individually. This is confirmed when the respondents are saying:

The comments he writes in our test books helps because you are able to where your problem is and how to correct your mistakes you have made in one of the questions, because he writes the answer next to the incorrect step, so it becomes easy to identify the problem you have. (BL 2, Dataset 2)

The quote below is of the view that no matter whether the task is informal or formal, each and every task given to the learners is treated as important; it is of value to them and is regarded as something that will help them to master the subject. The citation below concurs with this by saying:

The teacher underlines where the problem is and then writes the correct thing, then when you are given a home work it is easy for you to get a reminder of how it was done in class because there are corrections in your class book. (BL 2, Dataset 2)

At times the teacher will allow the learners to debate as a class on the answers they have given with the aim of letting them find the mistakes on their own and provide other ways of coming up with the same answer through questioning. This is confirmed by AL2 when citing that:

Sometimes when we argue in class about the wrong and write answer, he asks questions on the method you have used, then shows you other more methods to get to the answer in a simpler way. (AL2, Dataset 2)

The citation below implies that the teacher helps the learner individually step by step to assist the learner in identifying where he/she misses the point. He [teachers] also gives motivation by encouraging them not to give up but to practice and ask help from their classmates, meaning that they should form group discussions so that he does not get behind in the work.

The teacher will tell you that your answer is wrong and will show you where your problem is so that next time you get it right. He will tell you to try and work harder than to let you down as a result this will make you to go to other learner after school for some help so that next time you get it right and always remember how to do it.

(BL1, Dataset 1)

Based on the quote below the implication is that the teacher will allow you to work out the task up to the end so that he can identify where the learner's problem is before he gives assistance:

... but the teacher will let you finish and show where you got it wrong and then explain what you should have done to get it right. **(BL1, Dataset 1)**

Mostly, the teacher always guides them by writing comments whether you have done well or not; the implication is that he wants to keep them motivated all the time and in their minds they must always remember that you have to think positively when you want to succeed in life. This is confirmed by BL1 when the response is that:

... it is well organised but you couldn't answer some questions properly and this is the way of doing it. **(BL1, Dataset 1)**

If you have given the wrong answer, his comments will make me realise that I have to read and understand the question... To the wrong answers gives guideline in our books on how to answer the question. **(BL1, Dataset 1)**

According to the information provided by the participants, it clearly shows that the teacher draws the learner's attention by asking them questions. This means that they are made to concentrate on what they are doing because they will be asked what is happening on the chalkboard and have to explain this to others. One teacher is capable of identifying the problems that the learners have and fully explain how they should go about doing the task. If learners are trained to observe and intervene, they will master the work and improve their performance. To let the learners find answers on their own develops their thinking skills.

4.4.3. Category C: Comments that help learner check whether all the tasks have been done

An argument has been rendered in (c.f. Chapter 2, p.10) that learners should be told

if they have performed the task according to the expected standards. According to the data collected for this category there is no information from the respondents that suits this area

4.4.4 Category D: Comments which help the learner self-evaluate

Literature (cf chapter 2) shows that feedback in the form of comments can make learners evaluate themselves. This was confirmed by BL1 in the words that:

His comments are useful in the sense that I make sure I practise mathematics every day and bring up more questions to class for clarity and get a better understanding.
(BL1, Dataset 1)

It can be seen from BL1's response that the comments the teacher makes help him to work harder and identify his weaknesses in the subject so as to achieve his goals which can make one put in more effort as well as encourage the person to do well. In other words, a teacher's comments can make the learner feel confident. Such a state of mind can promote learning.

The words of encouragement that the teacher uses with his learners contribute a lot to their performance. They try by all means to win his heart by calculating correctly; they do not want to see him disappointed and they also see themselves as winners in the subject. This is confirmed by the response made by BL 1 when it is said:

Whenever I get a question similar to the previous one I always remind myself about his comments I heard before and try to calculate right and try not to go wrong. **(BL1, Dataset 1)**

It is assumed that at times the learners feel guilty of being told the same thing that they have been corrected on and this causes them to always remind themselves about the comments the teacher has made. The quote given by BL2 below concurs with this by saying:

I always go to other learners and practise what I got wrong in class so that when it is asked next time I will know the right answer. **(BL2, Dataset 2)**

Drawing from the above quotes, this indicates a stage where learners are engaged in using their own thinking and want to prove themselves that they can do it. This has built confidence with regarding what they can produce at the end of the task. They want their teacher to confirm that they have managed it and are looking for acknowledgement and praise. They get disappointed when this is not done because they have to prove it to their classmates that they are experts in this task. It is argued in (c.f. Chapter 2, p. 12) that they want to be informed that all is well.

Some of the information gives an impression that by the time feedback is given the learners are being guided and able to understand the work. Learners from school B are capable of doing self evaluation because their teacher has trained them to do so. Learners want to be recognised for the good work they have done to show that they are noticed. Learners hate to be deprived of the information they deserve to have and get frustrated.

4.5. DATA IN PORTFOLIOS FOR SCHOOL A AND B COLLECTED AND ANALYSED

A number of different portfolios of the various types for mathematics for formal tasks in school A were collected and analysed.

The table below shows examples of tasks that were written and marked according to the requirements of Continuous Assessment (CASS).

Table 4.5.1: Analysis of feedback in learners' portfolios

School	Date	Type of task	Obtained mark		Feedback
			L1	L2	
A	16/02/2012	Controlled Test	01	-	Mark only, no comment
	02/03/2012	Investigation	14	-	Mark only, no comment
	02/03/2012	Design Project	27	-	Mark only, no comment
	19/04/2012	Assignment	-	30	Mark only, no comment
	14/08/2012	Controlled Test	-	11	Mark only, no comment
	27/08/2012	Trial ExaminationP1	-	62	Mark only, oral comment
	30/08/2012	Trial ExaminationP2	-	77	Mark only, oral comment

The information in the above table is extracted from the dataset 3. The portfolios received were kept in the office of a Head of Division for sciences, stamped and signed as proof that they have been moderated. According to the researcher's observation, the findings are that there are no comments by the subject teacher in the learners' portfolios of mathematics in this school. It is taken into consideration that moderation is a control measure used by a HoD to make sure that learning and teaching has taken place in the school. Though the moderation for all the terms has been completed, observation indicates that there is also no feedback or feed forward from the supervisor to the teacher.

When the learners were asked why their classwork books do not having any sign of a red pen as a show of marking, this is the way they responded:

Our teacher does not mark the class work... (AL1, Dataset 1)

According to the above citation it may mean that the teacher just gives the class work for the sake of fulfilling one of the requirements of the subject policy and could not consider how important it is to him and the learners. Based on the unmarking of the work as it is said by **AL1** above, it clearly indicates that learners do not get enough assistance from their teacher as it should be, because the challenges that the learner might have will not be known as they are not aware whether the answers they have given are correct or not and which areas of work need their attention. More so, to the teacher marking of learners' work facilitates looking beyond the idea that there is a problem and allows more focus on how to fix the problem.

According to what is shown in **Table 1 of Dataset 3**, the marks obtained by **L1** in the first controlled test are unacceptable; they are disappointingly low and may imply that this learner is struggling with the work and has little understanding of the work which is already covered. As evidence was provided in the form of a portfolio, there is no indication that the teacher has done something in guiding the learner [as means of feedback] and also the HoD has not commented on what should be done to assist or support both the learner and the teacher.

According to the researcher's view there is too much preparation and more consultation that the learner has to do for the investigation and design project tasks

before they could be finalised and submitted. These tasks are difficult to be done in the same month as it is here according to the portfolio observation. This could be the reason why the learner's marks are The low marks of **L1** of the controlled test when converted into a percentage gives an average of 2%, which does not cover much work for the year, may also mean that this learner is really struggling in managing the school work. This should serve to direct the focus of the teacher in the areas which need attention and also point out to the learners that they need help before they can be given tasks like investigation which demands more concentration and independence to complete successfully. The assumption is that the learner might find the subject daunting.

This implies that it will be very difficult for the learner to make a move in attempting the task because there is lack of knowledge and understanding from the beginning because the work that is still coming is based on the previous one and is advancing in terms of the level. To the researcher it would have been better if the investigation was given in another term rather than being done at the same time as the design project. Through observation of the portfolio it can be interpreted that, though the learner has managed to pass the project, the learner should have performed far better than what was obtained if only one heavy task was given in this month, more especially when they are not even receiving any feedback.

Dataset 3, table 1 shows that **L2** has performed very well in the assignment; the assumption is that the registered date shows that this task was given in the first term before the schools close, meaning he or she [learner] might have been assisted at home or the learners have formed a group to do the task hence, when marks are converted, 60% is obtained. In any case, it is another form of getting feedback. The interpretation of the mark might be that, if the teacher was giving the feedback, this learner would have been performing much better even in other tasks such as a test where they are individually assessed.

The researcher has received the samples of learner portfolios from the HoD for sciences as they claim to keep them because learners have a carelessness of losing them and then they cannot be found when needed. Earlier on, the information which was provided by the respondents is that the assignments are not returned. The

statement given by the learners is contradicting with what the supervisor for science has shown the researcher. According to their statement, learners are convinced that when they have copied they do not get marks, but to their surprise they have been allocated marks according to what they see in the term report. This is very strange and questionable as the evidence is provided by the HoD. What is noticed is that the mark obtained by L1 is 30/50; when converted to a percentage it becomes 60%. Learners get the marks but there is no feedback to account for the mark obtained and therefore what could be the reason for not getting 100% or zero percent (0%) for that matter? Further, through observation, the question is, where is this big mark coming from and how is it obtained? Does that mean the teacher is only complying with the work that will be monitored for moderation and for CASS requirements and doing away with feedback to the learners? Are the rest of the assignment scripts all marked or not? The reason for this doubt is that the HoD has and keeps only ten percent of the portfolios for moderation.

The mark of the controlled test is very disappointing to be gained during the third term. It is evident that learners have not done well in the individual work done in the classroom. This may mean that the information given by participants of school A about the methods that the teacher uses in providing the feedback in class is proven to be true and correct. The respondents also make mention of the formation of their own study groups after they have noticed that the trial examination is close by. This is proven by the marks that the learner got for term three which is forty six percent (46%) as compared to twenty two percent (22%) of 14 August 2012 for the controlled test. These learners have realised that if they do not get assistance from outside the classroom, they will never succeed at the end of the year.

Table 4.5.2. below shows an example of marks obtained by three learners in the formal tasks

School	Date	Type of task	Total mark	Obtained mark		
				L1	L2	L3
B	19 February 2012	Class work		-	-	-
	20 February 2012	Class work		-	-	-
	25 February 2012	Class work		-	-	-
	27 August 2012	P1 Trial Examination	150	18	45	93

From the above table extracted from **dataset 3**, although the class work is not a formal task, the teacher has marked the learners' books and feedback is given in the form of writing although there are no marks allocated for the task. According to the researcher's view this implies that the teacher is looking at assisting the learners to master the mathematics so as to regard it as a simple subject.

From the task which was written on 20 February 2012 it is evident that there are ticks and crosses of the teacher in red pen as a sign of marking; the learner has written corrections, not only for the wrong part but the whole sum is re-written and this is also marked by the teacher. The researcher's analysis is that after teaching has taken place in the classroom, learners are assessed by getting a task to write; it is marked immediately and within a short space of time learners are expected to do corrections before the period ends. The researcher also observed from the portfolios that for every class work the teacher has given, there is a signature next to each and every question. This gives an impression that whilst the learners are busy writing the task, the teacher moves around marking them and gives feedback where necessary; he does not wait for them to finish. The assumption is that the method used by the teacher assists in giving guidance to the learner and picking up mistakes before getting to the end of the task, meaning feedback is provided in each and every step they take. The researcher's view is that the strategy that the teacher uses in asking the learners to work on the chalkboard is another form of giving feedback and a way of outsourcing; this will help the rest of the class to pay more attention to what is taking place and to prepare them for their examinations.

In the class work dated the 25th of February 2012, though there are mistakes made by the learner in the calculation, there are also motivating comments such as "*good attempt*", "*very good*", "*good*"; others are warnings like "*be careful*" and each feedback is written next to the relevant step. The teacher underlines the numbers that the learner should be careful of to avoid confusion. In some cases the teacher has shown another version or method next to the correct one the learner has used to let the learner know that there are other ways of getting to the same answer.

Looking closer in Table 4.32 on the marks obtained by these learners for the trial examination Paper 1(P1) and Paper 2 (P2) dated 27th and 30th August 2012, along the red marginal line of their scripts there are corrections written in a red pen. To the researcher, through observation, the assumption is that when the learners are shown their scripts they will be able to know how they should have responded; and there are also notes for him [the teacher] where he will put more emphasis during the time when they are doing revision in the next term. When the researcher asked for more portfolios to choose from, learners brought to the researcher's attention that some portfolios are not with them as their teacher is still marking them because he is new in the school and has discovered that in some classes learners do not have the formal tasks required for CASS moderations. The other assumption could be that if this teacher was available from the beginning of the year, because of the comments he writes in their books, these learners should have scored far better marks than the ones which appear in table 2 above.

The sample of portfolios received in school B was not part of the ten percent (10%) for moderation and therefore no feedback was provided; the assumption is that teachers only concentrate on the work that will be supervised and moderated for CASS policy compliance. The marks obtained could also mean that the fact that there is a change of teachers in the school affects the performance of learners because they have not been getting feedback, this is evident in AL 2's comment when she said *"... the new teacher is still marking ... because others [learners] do not have all formal tasks that we have which are required for CASS moderations"*. But this teacher has tried his best in giving feedback to the learners in all forms of tasks that the learners wrote.

4.6. CONCLUSION

In conclusion, the chapter has highlighted the analysis of the collected data. The data presented above, through interviews in particular, the portfolio observation gives evidence as to whether the learners are getting feedback from their teachers or not. It is through interviews to get information on how they deal with the feedback they receive from their teachers. It is also imperative to know if it is good enough in assisting the learners to cope with the work of this grade so as to improve the performance. If the feedback provided is good enough and used by the learners it

would mean that the Eastern Cape Department of Education can obtain quality results in the subject of Mathematics. The lack of giving proper and clear feedback affects the performance of the learners. The learner's expectations are to get their workbooks back marked and with comments written whether they are good or bad to be informed of their strengths or weaknesses. In the next chapter there will be a discussion of the foremost findings of the study, the recommendations and the conclusions which arise from the data of chapter two on literature review.

CHAPTER 5

DISCUSSION OF FINDINGS

5.0 INTRODUCTION

This chapter discusses the main findings of the study. The chapter is divided into two main categories in the following manner: the first part focuses on the potential impact of different types of feedback comments; the second part is on feedback and assessment in education. The discussion ends with the conclusion to close the chapter.

5.1 POTENTIAL IMPACT OF DIFFERENT TYPES OF FEEDBACK COMMENTS

In chapter 2 it was seen that there are different types of feedback. This study found that each type of feedback affects learners in different ways which include the fact that, when it is given in a positive and meaningful way, it can cause learners to be motivated. If learners are motivated, according to the achievement theory (c.f. Chapter 2) they develop high self esteem which enhances the learning environment. The study has also seen that when learners are motivated an interest in learning is being promoted. A learner who is motivated can feel confident and try to do more. This means that when they have this kind of feeling, this refers to the theory of self-regulation (c.f. Chapter 2) because they become intrinsically motivated and are able to adapt their skills and strategies to various tasks, set, monitor and evaluate their own goals. The significant point here is that when learners are intrinsically motivated, they get excited and show interest in getting engaged in the activities with a sense of enjoyment. When there is that kind of feeling within them, they put more effort and persistence in whatever class tasks they come across and are able to solve the problems at a higher level of difficulty. It would mean that if the learners use the feedback effectively, they become orientated in learning and get developed in new knowledge and skills.

It has been revealed in Chapter 4, section 4.2 that though the learners in school B gain self motivation in the feedback process, they do not have the same level of feeling; some need more support to be motivated and ask assistance from their

classmates. The main point here is that it is, therefore, imperative that the teacher should also be guided on how to develop a strategy to keep the learners focused on what they do all the time. If the teacher is failing to involve the learners in discussions, the learners feel they do not belong to the same group and will gain nothing at the end of the session.

The finding in Chapter 4, section 4.2 further reveals that the teacher of school B also provides the feedback in the middle of the task with the aim of identifying some areas that need to be considered; to find out if the learners are still on the right track according to given instructions. If the learners are guided, according to the process level model (c.f. Chapter 2, section 2.3), the teacher is able to pick up the challenges the learner is experiencing with the task. What is crucial with this is that the teacher is able to diagnose the learner's weaknesses and immediately give suggestions against what the learner has written in order to help the learner to improve performance. This means the teacher and the learner can be engaged in a dialogue, meaning that it is not only the learner who receives the feedback but the teacher is found also being involved in the discussion about feedback.

Secondly, the kind of help that the teacher provides is looking on personal progress rather than giving a mark to the task which later promotes the concept of self efficacy (c.f. chapter 2, section 2.4). Their level of competing and comparing marks with one another is reduced accordingly. In turn, the learners monitor their performances themselves which is maintained by means of self efficacy (c.f. Chapter 2). This may lead to independent learning and the development of habits and attitudes towards self assessment, reflective skills and later success. However, it has also been seen that motivation cannot always necessarily lead to positive outcomes; learners become more relaxed and do not practice more often thinking that they have all the necessary information for the task. This might have implications for their level of performance which will not be outstanding.

Yet, the findings in Chapter 4 reveal the opposite to the above statement. It shows that learners in school A mainly received oral feedback (c.f. Chapter 4) which does not develop them at all. If the learners feel that way about this kind of feedback,

learning can be seen as being unproductive to them. More so, this could mean that the learners are not provided with enough information on their performance.

The study also showed that when learners are taken through in their tasks individually, it can assist them in closing the content gap they might have in the subject and gain more knowledge. This might mean that if the lack of knowledge is addressed, according to what is said about the formative assessment (c.f. Chapter 2, p.15), this would mean that their objectives in doing mathematics can be achieved. Although their content gap might be attended to, but learners can experience other challenges such as various methods in solving the problem in the same tasks. If the teacher does not suggest the other ways of solving the problem, the learners might not know and use only one method that is introduced to them.

The importance of using various methods to get to the same answer is that the learners' capabilities are not the same; they understand differently and might not all understand one method. Therefore, the study has looked at notifying the teachers that their feedback should demonstrate and fully explain various procedures they know towards the correct answer so that the learner can use the one that is easy to understand. This would also mean that when the learners can come together after school hours, they can share the information and teach one another. It is revealed from Chapter 4 that they have more time to interact with one another other than in the classroom where the periods are fixed within a specified session. The implication is that they can work independently and confidently and sharpen their sense of enthusiasm to learn. It is very interesting to note that the learners who get all the information at hand have a tendency of performing much better than those with less information.

It has been identified from the research that in school A (c.f. Chapter 4) learners are not interested in marks only but when learners are provided with a mark only this can retard their metacognitive process levels (c.f. Chapter 2, section 2.3). This implicates that their strengths and weaknesses are not being addressed at all. The teacher's intention is not to develop the learner but to allocate a mark against what the learner has written. This has shown to have a negative impact on motivation (c.f. Chapter 4) which results in failure in preparing their life-long learning. The implication

is that this promotes the fact that the learners will focus on passing the test only rather than looking at achieving the learning objectives. Furthermore, it underlines the point that learners have to be given an opportunity to be exposed to demonstrations and reasons for performing the task. The main focus here is that it can be seen that the learner's self image is being negatively affected; meaning their involvement in performing the task cannot improve. This destroys the idea that feedback is more effective if it is explanatory and gives more details on how tasks can be improved.

The findings in school A have shown another dilemma in the approach when feedback is given since they do not get enough assistance in accordance with their expectations. What they receive does not help them to achieve their objectives. Further, there is an impression that they are completely dissatisfied about the approach the teacher is using to give feedback. There is no proper guidance on imparting the feedback so as to improve their (learners) performance. It has been reported that there are incidents of a negative tone from the teacher's side when feedback is given. Generally, it means that such behaviour does not give them the full support they deserve since they do not see themselves as important to their teacher.

5.1.1. Verbal feedback

The findings show that the learners at both schools received the verbal feedback though the approach in delivery is not the same. The understanding is that this kind of feedback comes as teaching and learning is taking place and immediately informs the learners' responses to the task given (c.f. Chapter 2). It has been identified in the findings (c.f. Chapter 4) that the teacher in school A believes in this kind of feedback, but learners feel different about this. The findings revealed that there are many challenges in the teacher's approach in using the verbal feedback. This implies that learners are dissatisfied about the verbal feedback. The point here is that the learners feel that this form of feedback has demotivated them because it does not tell the details that the learner should concentrate on. This can also lead to humiliation as it is done publicly in front of other learners (c.f. Chapter 4). This implies that the learners are against this kind of approach that the teacher uses in

giving the feedback and could mean that learners do not feel valued and therefore there is no way forward that has been constructed for them by the teacher. The emphasis they are trying to make is that there are no good relations with the teacher and the learner and, therefore, they could not see verbal feedback as working nor being important in this situation. The result is that the communication between them is shut down and they become less interested as to whatever the teacher may say about their work. The point here is that there are no intentions of encouraging a dialogue amongst the teacher and the learners and, therefore, their self assessment skills (c.f. Chapter 2) are not developed at all. This emphasises a point that the learners will not be able to know their strengths and weaknesses in their tasks which results in no improvement in their performance. The challenge that the responses reveal is that as the teacher gives the learners homework to do, they do not regard it as important and helpful to them; as a result they do not feel at ease when the teacher gives it.

The findings also show a dilemma in the use of body language in responding to the confirmation of the wrong or right answer. The implication is that the learner might read the teacher wrong which could result in the learners to be seen as not being cooperative in the class discussions. However, such an attitude can give an impression that they do not need information from their teacher. More so, it could also mean that the learners are not aware of the expected learning objectives in the subject.

5.1.2. Written feedback

The main reason for applying this kind of feedback is that the teacher responds to the learner's response on the task given informing the learner about his or her performance. Its main purpose is to acknowledge that the answer is correct and is in line with the set standards of the task (c.f. Chapter 2) to encourage the development of critical thinking. Though it works like that, it has been revealed in Chapter 4 that in one of the school things are not as good as they should be. When learners have submitted their task to the teacher, in return their expectation is to see marking with clear and concise comments accompanied by marks. These remarks inform the learners what to do in correcting the task or it can be a comment that makes them

feel proud or disappointed and frustrated. It is therefore, of great importance for the teacher to align the feedback with the standards of the curriculum.

Apart from the point that written feedback helps the learners to close the gap in their learning and gain more knowledge, the findings (c.f. chapter 4) reveal something different from what is expected, a challenge with the teacher regarding written comments (c.f. Chapter 4, section 4.3). The emphasis of the learners is on improving their performance in the task but they could not succeed in that. It is revealed from the interviews that though the teacher is aware of this, the feedback could not be provided in the form of writing although he [teacher] knows its importance. The point here is that, if the teacher does not provide feedback about what the learners have written, then something is not going right with the teaching and learning of the subject. The learners will not be able to know their abilities in the subject; this could lead to their self esteem being drawn down.

5.1.3. Different purposes of feedback comments

The findings in Chapter 4 revealed poor delivery of the feedback and therefore it does not serve its purpose. It was evident that the learners in school A do not communicate well with their teacher and this can be interpreted as they are being not interested in their learning. The problem here is that the teacher/learner relationship is not treated as the most critical facet of learning. This implies that the teacher is giving feedback without making specific comments (c.f. Chapter 2, section 2.4.2) which has a negative impact towards their performance. Because of that learners cannot get effective feedback that informs what needs to be fixed in their work to make an improvement in their performance. The purpose of providing feedback is that it must ensure that it makes a difference to the learner's performance but the challenge here is that it not effective; as a results the teacher cannot give details and identify the learner's strength and weaknesses. The implication is that the teacher does not consider the fact that to provide feedback to the learners is also adding value to the teacher himself. Seemingly he is not interested in the services he renders to the learners and in the verification of the set outcomes. However, it means the teacher is not doing his job effectively by not informing the learners of their performance. This implies that feedback is not regarded as a significant aspect

that forms part of learning which can be used in closing the content gap that the learners might have, as is shown in the figure below.

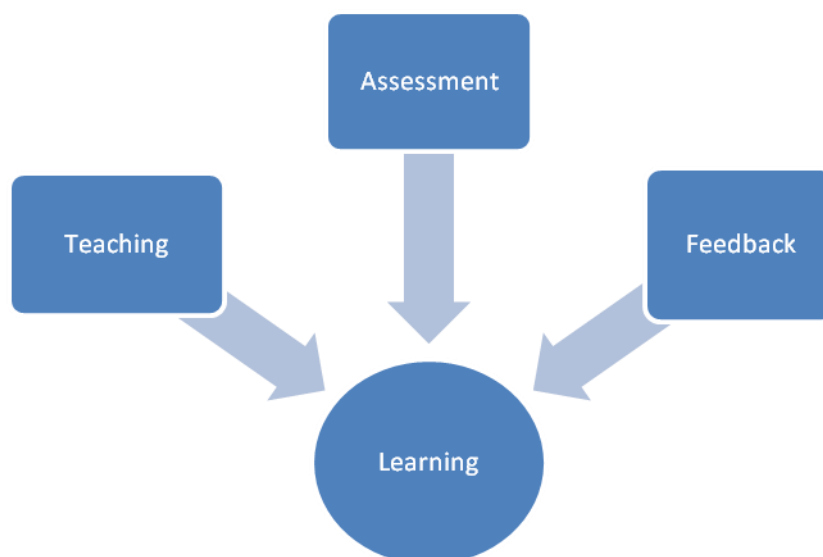


Figure 5.1. Shows how learning should take place to be complete

Figure 5.1 above illustrates that teaching, assessment and feedback form part of the learning process; if it is not treated like that it would mean that there is a challenge. As a teacher it should be well known that after the learners have been taught and assessed, feedback has to be provided automatically to inform them of the challenges the learners might have. Apart from the above statement and the fact that the teacher should be encouraged to check the progress timeously in all stages of the task (c.f. Chapter 2), the findings of the study show the opposite and it has been revealed that there is a problem with regard to written feedback (c.f. Chapter 4). It appeared from the responses that the teacher knows very well that he must mark and give comments on the learners' work, but he did not see it as important for his learners. The main focus here is that if the teacher could not provide feedback on the learners' work, it becomes impossible for the learners to learn effectively as they are not informed of how well they have performed the task. The learners will only assume that they have done well in the task and repeat the same mistakes in the next task. The learners who may not be informed of their progress will not gain any

new knowledge and, therefore, there is no skill development in the subject. Kotzé (1999) pointed out that there will be no impact in the teaching and learning if there are no written comments in the learners' books. The point here is that learners from school A are not getting written feedback to improve their learning; as a result they do not know whether they are going forward or backwards in knowing the subject.

The findings in Chapter 4 have revealed a problem with regard to the delivery of the feedback. According to the feelings of the learners, at times the teacher does not give feedback in a proper way; he will show a negative attitude which is not acceptable to the learners. This implies that the learners lose interest before the teaching and learning could take place and therefore they do not get adequate assistance to achieve their objectives. It means that, generally, the learners are completely discontented about the approach the teacher uses in providing them with feedback since the teacher does not satisfy them in relaying the feedback so as to improve the learner performance in order to do better in their following tasks. The findings have also shown another dilemma at the delivering of the feedback with regard to the manner in which a negative tone (c.f. Chapter 2) is used when the feedback is given. If the teacher sometimes shouts at their faces in expression of her anger, this frightens the learners. The implication is that shouting is the behaviour that is unacceptable which may cause a negative attitude resulting in fear with other learners. Furthermore, such a kind of feeling gives an impression that one loses focus. However, it means that learners will not hear and understand when feedback is given since they are afraid of the teacher. More so, feedback in the form of simple positive comments were beneficial while harsh criticism is counterproductive (cf. Chapter 2, section 2.5.2).

The findings show that feedback in **school A** has not been taken seriously especially in the tasks like assignment. A teacher who does not consider the importance of returning the learner's work with comments (c.f. Chapter 4). This implies that the learners might not see the importance of the feedback and, therefore, regard themselves as good performers towards the task.

The findings also revealed that the teacher has shown heartlessness and selfishness towards the learners' portfolios. The teacher who gives the task and collects the learners' books felt that they do not deserve to get their portfolios back as it is

claimed that the work is the same. This implies that he does not even want to consider marking each one's style of writing out of the similar work. However, the teacher does not give fair judgment to learners and only focuses on giving them the same treatment and discourages those who try their best. It would mean that learners lose hope and one's confidence is being threatened. This gives the implication that the teacher is refusing to use the learners' work in measuring the level of their performance and to identify the difficulties they are experiencing and to devise means of giving the kind of assistance they need to improve their learning.

Apart from what the findings are according to the above paragraph, the responses (c.f. Chapter 4) revealed the opposite as far as school B is concerned. The results in the study show a friendly and supportive guidance to the learners in the sense that he [teacher] always avails himself to give assistance all the time and feels he cannot afford to see the learners struggle alone to solve the problems given. This gives an impression that if the teacher works like that with the learners, they will regard him as a good instructor in his subject.

5.1.4 Messages learners get from feedback

In chapter 2 it has been noticed that there are many methods that the teacher can use when giving feedback to the learners. The study has revealed that if these methods are used interchangeably it can promote the knowledge of the learners into a higher level for all of them. If then their knowledge level is developed, they can improve their performance without doubt. The study has also discovered that if the learners are developed using the models that Hattie & Timperley (c.f. Chapter 2) are talking about, their cognitive thinking level and ability to understand the task will be developed too. The implication is that the messages that might be given in the learners' tasks are found to be in the most part in the area of teaching and learning as has been discussed in (c.f. chapter 2). This is regarded as an essential component in all learning contexts. This comes to a point where the learners' level of motivation is elevated and they benefit a lot. If then the learners feel that they are benefiting, they become very confident in their learning and improve their performance without any hustles. The main significant point here is that learners can

be developed and also threatened through the messages that they get from the feedback if the approach of the teacher is not considered good.

In chapter 4 of the study, it has been shown that feedback can be done constructively. The study found that in school B learners are more involved when the teacher is identifying their mistakes in the task. If they are involved according to constructive feedback (Irons, 2008) they will know how to do the task and their learning will be highly improved. If the learner knows what needs to be corrected in the task, he becomes happy, gets more involved in discussions, raises more challenges he encounters with the work and does it more effectively in the next exercise. This means that their involvement is being acknowledged and their successes will be attributed and they will get more motivated.

Apart from that it is revealed from the findings in the interviews that the teacher in school B understands his class very well. It is clear from the findings (c.f. chapter 4) that the teacher delivers the feedback in an appropriate manner and it becomes worthwhile to the learners. If there is that kind of feeling for the learners, the implication is that the teacher knows and understands that feedback is part of teaching and learning and is expecting a situation where there will be a positive interaction between the teacher and the learner. This supports the idea of Hattie & Timperley (2007) of closing the content gap with the purpose of reaching the learner objectives.

The findings reveal another dilemma with regard to the process of giving feedback in passing the message across: a teacher sometimes gives learners homework but cannot look at it in the next day. The feeling of the learners is that their efforts are not recognised. If they feel like that the impression is that their self-esteem is reduced which later affects their improvement in learning the subject. This kind of attitude from the teacher gives the impression that the learner gets feedback that denigrates them and he is not interested in assisting them to understand the task. This may also change the emotions of the learners (c.f. chapter 2) and they become negative.

More so, the findings revealed that feedback can give a negative message. When the learners have that kind of feeling, it could mean that they may think they are incompetent to do mathematics as a subject so they opt for mathematical literacy. The point here is that the relations between the teacher and the learners may be affected.

5.2. FEEDBACK AND ASSESSMENT IN EDUCATION

In chapter 2 it was seen that assessment is key to teaching and learning and that feedback is an integral part of teaching and learning. This study found that feedback carries important messages in assessment, one of which informs learners that they are doing well and are on the right track (c.f. chapter 4). When the teacher assesses the learners, there is a specified criterion that the teacher follows for the purpose of showing uniformity in the marking. It has been revealed in chapter 4 that learners were given a formative form of assessment to evaluate them individually (c.f. chapter 2). The implication is that if their performance is individually evaluated, each one's errors in the task will be identified. It is the tool that is referred to as 'midstream' as suggested by Karl (2005) to be used in identifying the learners' misconceptions and mistakes while learning is in progress. The emphasis here is that the learners who need extra help will be assisted accordingly. It is evident from the findings that the learners in school B were assessed and their work marked with comments to correct their mistakes. The point is that they feel that their teacher has been fairly good to them as they can refer to their books when necessary. The learners of **school A** find the opposite in the sense that it is revealed in chapter 4 that they cannot comment about the written feedback. This implies that the learners are dissatisfied and may regard their teacher as being not helpful to them.

It has been discovered from chapter 2 that assessment of learning is part of assessment for learning. The study found out that this encompasses motivation and sustains the enjoyment that the learners gain from it, even beyond schooling. If that is the case, there is a possibility that their learning strategies are developed and they become interested in learning. The implication is that their learning skills (Shute, 2008) improve which is related to higher achievement. The point the study emphasises is that teachers should be encouraged to follow the procedures of providing feedback to the learners. Moreover, when the teachers act like this, the

learners will be curious about reading their comments and later use them. If the learner uses the comments given, it will be of advantage to them compared to those who look for marks only. It is evident from the findings (cf. chapter 4, section 4.2) that learners from **school B** have gained the skill of independency in finding the information from their classmates outside the classroom as they fully understand what he wants them to do. The study revealed that their self esteem is built up and so is the self regulation (c.f. chapter 2). If their self-esteem is developed, they regard themselves as best achievers in the subject. They see themselves as people who have achieved the set goals and are seen as best performers.

5.2.1 Feedback and assessment of learning

It is evident from the findings (c.f. chapter 4.2) that learners from school B have gained a skill of independency in finding the information from their classmates outside the classroom as they fully understand what they want them to do. The study revealed that their self esteem is developed and regard themselves as the best achievers in the subject. Learners see themselves as people who have achieved the set goals and seen regard themselves as best performers. The emphasis here is that learners are informed of their performances so as to improve in order to achieve the required standards. If that is so, their self regulation (c.f. Chapter 2) will be built up. The building up of self regulation may depend on the approach that the teacher uses in delivering the feedback. It is evident from the findings in chapter 4 in school B that the teacher has aroused the learner's interest in learning and they find feedback useful in their studies. The implication is that their gap in the content has been closed and will be able to be in the self level. The focus is not only on the learners, but it allows the teacher to have a proper planning for the next lesson based on how learners have performed in the task

The findings in chapter 4 section 4.2 for **school A** disagree with the above discussion on feedback. It has been revealed from the study that learners of school A showed a feeling of unhappiness towards the methods used for feedback. Their unhappiness may lead to poor relations with the teacher and to be afraid to ask questions for clarity. The impression might be their teacher is not interested in developing them by himself but rather outsources the feedback (c.f. chapter 4) to

other learners. The implication of outsourcing might be disadvantaging them as their classmates do not have all the information the teacher has.

Contrary to the feeling of learners above, in school B the study reveals that (c.f. chapter 4) the learners feel very comfortable with their teacher on the feedback they receive. They see themselves motivated and eager to learn and work harder than before. The point here is that learners of school B have developed a sense of working independently but may prefer to be monitored. They have gained independency because the assumption is that they feel that they have been given guidance in their learning.

5.2.2 Feedback and assessment for learning

In the study, it has been identified that assessment as learning can be interpreted as the organisation of the assessment skills. The point is that it forms part of learning (Tan, 2011). If it is seen as learning, the implication is that certain guidelines have to be followed with the view of developing their performance and for them to grow mentally. The study revealed that for learning to take place efficiently more assessment tasks must be given. If this happens, all learners will stand a chance of improving in the content they have.

5.2.3 Significance of feedback

To provide effective feedback the teacher must know and understand that it has to be individualised so that it suits a specified learner. According to what is said in chapter 2, it is revealed from the findings of the interviews (c.f. Chapter 4) that the information provided in the above statement differs from what is happening in **school A** where learners are discouraged and feel like quitting to study mathematics and prefer mathematical literacy. It is evident from the interviews that the teacher gets discouraged by the learners and mostly feels disappointed with the marks they get. It is revealed in chapter 4 that the teacher gets along with those who perform better in class and also promotes their status by outsourcing the task of giving feedback to them. Though the teacher knows the learners' weaknesses, there is no passion on her side to assist them. The impression is that the amount of feedback that she provides to the learners will not make that much difference in closing the gap on the lack of knowledge they have. The implication is that the three questions

that Hattie and Timperley (2007) ask will not be fully addressed if the teacher does not change her style of delivering the feedback. Real learning takes place when feedback is used in ways that help the learner to close the gap between where the actual levels of the learners are and where they need to be ('reference level') (Ellery, (2008, p. 422). The process of giving feedback to the learners is the follow up on the exercises that the teacher has taken them through in enriching their knowledge and developing their thinking skills for better performance. At the same time the teacher evaluates himself in strategies that he uses when providing the information.

It is different with **school B** where the teacher provides the feedback in abundance because he avails himself even after school hours. In chapter 4 it is revealed that whilst the task is not yet finished, he goes around the class and looks at their work to pick up their mistakes at an early stage and at the same time provides feedback to learners individually. The teacher trains them to get the facts straight through asking questions whilst the task is performed on the chalkboard. This exercise forces the learners to stay focused all the time. The teacher is looking at providing effective feedback which, as pointed out by Tan (2011), should meet the required standards of education.

5.3 CONCLUSION

The chapter has looked at how feedback is given in both schools and the handicaps that might cause the learners not to develop in their performance. It has looked at methods the teachers use in delivering the feedback and what could be done to improve it in trying to close the content gap in the areas of weaknesses in mathematics.

The last chapter will give a summary of the main findings, the conclusion and the recommendations that will assist which are purely based on this study.

CHAPTER 6

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.0. INTRODUCTION

In this chapter the summary of the main ideas of the study, findings, conclusions and recommendations are presented.

A summary of the research findings shall be drawn from each research question followed by conclusions. The chapter will be closed by making recommendations on feedback and for further research.

6.1. SUMMARY OF MAIN IDEAS OF THE STUDY

Chapter one provided an introduction, background and context of the study. The master concept of feedback was introduced and the gaps in research that justified this study were identified. This enabled me to position the research problem from which research questions; the purpose and significance of the study were formulated. The chapter also introduced the literature review and the methodology of the study.

Chapter two reviewed literature focussing on key concepts of the study as well as theoretical framework. It covered different types and levels of feedback that are linked to learning. Four theoretical lenses and self-determination theory were discussed.

Chapter three gave the methodology of the study. It sketched the orientation of the study and the research paradigm on which the study was anchored. Here a case study design was presented and justified. The chapter then went on to outline the methods of data collection in the field, detailing how research methods theory was applied in practice. The chapter ended with a narrative on research quality to demonstrate how research rigour was achieved.

In chapter four data from fieldwork was presented and analysed. Data was presented under various themes derived from the research questions. The data in some cases provided evidence of types and levels of feedback that other researchers reported in literature. In other cases there was no corroborative evidence.

Chapter five provided a discussion of the main findings which used the lenses of the theoretical framework to understand what the findings might mean in their implications for teaching and learning and for further research.

The final chapter, chapter six, gives a summary, main findings, conclusion and recommendations.

6.2. MAIN FINDINGS OF THE STUDY (SUMMARY OF THE FINDINGS)

The main findings are divided into four themes: These are messages learners get from feedback; task level feedback; process level feedback; and self-regulation level feedback.

6.2.1 Messages learners get from feedback

Feedback in both schools conveyed certain messages to learners. These included

- Motivation to do better
- Need to do better at their work
- Affirmation that they are on the right track or neglect and left to figure out how to do tasks

6.2.2 Task level feedback

- Learners in School A mainly received oral feedback which was often seen as denigrating them. Such feedback learners felt did not help them to understand the maths tasks at hand. They did not receive written feedback.

- Learners in School B received both oral and written feedback and they felt that the feedback assisted them to understand the task at hand. They saw this as a way of building up their confidence in all the tasks they came across.

6.2.3 Process level feedback

- Learners in School A did not report receiving process level feedback. They only received oral feedback which did not show step-by-step where the learners made mistakes or went wrong.
- Learners in School B reported that teachers took them step-by-step through the task individually to help them understand.

6.2.4 Self-regulation level feedback

- In School A there was no data on this.
- In School B learners reported that feedback they got from teachers assisted them to monitor their progress.

6.2.5 Self-level (personal evaluation)

- In School A learners are not able to evaluate themselves because they did not receive written feedback.
- In School B learners reported that they were able to evaluate themselves using written comments from teachers.

6.3. CONCLUSION

Based on the findings that are mentioned above, it can be concluded that in one of the schools learners did not receive meaningful feedback that addresses the levels espoused in Hattie and Timperly's (c.f. chapter 2) categorisation. In the other school the feedback learners received corroborated what is reported in literature and, therefore, provides evidence that feedback was an important contributor to their learning.

6.4. POTENTIAL CONTRIBUTION OF THE STUDY

Feedback in education has been identified as one of the significant strategies in teaching and learning and the feelings and perceptions of learners on how it should be delivered to them needs to be taken into account as a way of capturing learners' voices that can make a contribution to proactive and further research.

6.5. RECOMMENDATIONS

On the basis of the findings of this study, two sets of recommendations are given below:

6.5.1. Suggestions to be used by educators to give feedback

Teachers need to be capacitated on various strategies in giving feedback and be reminded on how important it is to inform the learners of their performance and the reasons for not doing so well in the steps of the tasks. The information from the study seem to suggest the following:

- Feedback should not be made too general, meaning being used simply for right or wrong answers, but it should state why the learner has been allocated a specific grade and how they should correct their mistakes.
- Learner errors must assist the teacher to have a broader picture of what more they need to do.
- Various strategies to be successful in giving feedback should be considered and implemented.
- Intensive monitoring of learner's tasks to assist in the learning process should take place.
- A good approach in providing feedback builds high self esteem and develops teacher/learner relationships

6.5.2. For further research

Although some evidence of different types and levels of feedback in the classroom are reported in this study, further research needs to be carried out on the relationship

between types and levels of feedback and learner performance. Studies could also be carried out on learner perceptions of feedback in other learning areas.

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APPENDICES

APPENDIX A - LETTER TO SCHOOL PRINCIPALS

1429 N.U.9

MDANTSANE

5219

THE HEADMASTER

..... HIGH SCHOOL

.....

EAST LONDON

5201

Dear Sir/Madam

REQUEST FOR PERMISSION TO CONDUCT RESEARCH FOR MASTER'S DEGREE IN YOUR SCHOOL

I herewith request permission to conduct a research study in your school as part of the requirements for the fulfilment of my Master's degree in Education. I am a student at the University of Fort Hare. The title of my research study is: **A case study of learner perceptions of feedback received on performed tasks in selected schools in the East London district in the Eastern Cape.**

The purpose of the study is to conduct an in-depth investigation to ascertain what the learners say concerning how teachers' feedback helps or does not help them to improve performance.

The study will involve the following learners from whom will responses on the topic will be solicited:

- one male and one female mathematics learner doing grade 12
- a group of male and female mathematics learners with no fewer than five and no more than ten are in grade 12.

The findings from the respondents will be between me as the researcher and my supervisor. Under no circumstance will any of the responses from this school be disclosed.

I am counting on your cooperation. For any further information you can contact my supervisor, Professor G. Moyo, at 082 408 3269.

Yours faithfully

Ngudle-Yafele N. G. (Mrs) Contact Number: 076 688 0493

Student Number: 201013906

APPENDIX B

LETTER TO PARTICIPANTS

1429 N.U.9

MDANTSANE

5219

Dear Sir/Madam

REQUEST FOR PERMISSION TO PARTICIPATE IN A MASTER'S RESEARCH STUDY

I am a student at the University of Fort Hare. I am required to conduct a research study as part of my Master's degree in Education. The title of my study is: **A case study of learner perceptions of feedback received on performed tasks in selected schools in the East London district in the Eastern Cape.**

The purpose of the study is to conduct an in-depth investigation to ascertain what the learners say concerning how teachers' feedback helps or does not help them to improve performance in mathematics.

The study will require you to be interviewed to solicit your responses on the above research title and also your mathematics portfolio would be analysed to help answer research questions. The findings of this study will strictly be between me and my supervisor and under no circumstances will any of your responses be disclosed to any other person(s). It is anticipated that the involved learners will benefit by obtaining an increased understanding of feedback and its related challenges during the course of the study.

For further information you can contact me or my supervisor on the following numbers respectively:

Researcher: 076 688 0493

Supervisor – Professor G. Moyo: 082 408 3269

Thank you in advance

Yours faithfully

Ngudle, N.G.

.....

.....

Date

Student Number: 201013906

APPENDIX C

CONSENT FORM FOR PARTICIPANTS



University of Fort Hare
Together in Excellence

Ethics Research Confidentiality and Consent Form

Please note:

This form is to be completed by the researcher(s) as well as by the interviewee before the commencement of the research. Copies of the signed form must be filed and kept on record

As a Master in education (Med) student at the University of Fort hare, conducting research regarding received feedback. I am interested in finding out more about how the feedback helps. I am carrying out this research to help to get data to complete the dissertation.

Please understand that you are not being forced to take part in this study and the choice whether to participate or not is yours alone. However, we would really appreciate it if you do share your thoughts with us. If you choose not take part in answering these questions, you will not be affected in any way. If you agree to participate, you may stop me at any time and tell me that you don't want to go on with the interview. If you do this, there will also be no penalties and you will NOT be prejudiced in ANY way. Confidentiality will be observed professionally.

I will not be recording your name anywhere on the questionnaire and no one will be able to link you to the answers you give. Only the researchers will have access to the unlinked information. The information will remain confidential and there will be no "come-backs" from the answers you give.

The interview will last around (50) minutes. I will be asking you questions and ask that you be as open and honest as possible in answering these questions. Some questions may be of a personal and/or sensitive nature. I will be asking some questions that you may not have thought about before, and which also involve thinking about the past or the future. We know that you cannot be absolutely certain about the answers to these questions but we ask that you try to think about them. When it comes to answering questions, there are no right or wrong answers. When we ask questions about the future, we are not interested in what you think the best thing would be to do, but what you think would actually happen.

If possible, I would like to come back to this area once I have completed my study to inform you and your school of what the results are and discuss the findings and proposals around the research and what this means for teachers in the school.

CONSENT

I hereby agree to participate in research regarding received feedback. I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop this interview at any point should I not want to continue and that this decision will not in any way affect me negatively.

I understand that this is a research project whose purpose is not necessarily to benefit me personally.

I have received the telephone number of a person to contact should I need to speak about any issues which may arise in this interview.

I understand that this consent form will not be linked to the questionnaire, and that my answers will remain confidential.

I understand that, if at all possible, feedback will be given to my community on the results of the completed research.

.....

Signature of participant

Date:.....

I hereby agree to the tape recording of my participation in the study

.....

Signature of participant

Date:.....

CONSENT FORM B

RE: OFFICIAL CONSENT FORM

RESEARCH TITLE: A case study of learner perceptions of feedback received on performed tasks in selected schools in the East London district in the Eastern Cape.

I, the undersigned, do hereby indicate that I have received a letter to participate in the above study and that I will be interviewed by Nozuko Gloria Ngudle, a student at the University of Fort Hare.

The following conditions will be adhered to by the researcher and by me:

1. The participant has the right to withdraw at any time without apology or consequence.
2. The participant is free not to answer any question that he/she is not happy about.
3. Participation is not compulsory but voluntarily.
4. The respondent's anonymity and confidentiality are guaranteed.
5. No form of discrimination will be levelled against respondents during the course of the study.
6. Response will not be forwarded to any other person except to the supervisor.
7. The the interview will be tape recorded (for the researcher to capture all the interview conversation) or no tape recorded will be used (the researcher has to write faster to capture the interview conversation) (Please tick)

I therefore grant consent or do not grant consent (Please tick) to participate in the study.

Signature of participant: Date:

APPENDIX D - APPROVAL LETTER - DEPARTMENT OF EDUCATION



EDUCATION

STRATEGIC PLANNING POLICY RESEARCH AND SECRETARIAT SERVICES
Steve Vukile Tshwete Complex • Zone 6 • Zwelitsha • Eastern Cape
Private Bag X0032 • Bhisho • 5605 • REPUBLIC OF SOUTH AFRICA
Tel: +27 (0)43 702 7428 • Fax: +27 (0)43 702 7427/38 • Website: www.ecdoe.gov.za

Enquiries: Dr Heckroodt

Email: bernetia@iafrica.com

04 September 2012

Mrs. NG Ngudle-Yafele

1429 N.U. 9

Mdantsane

5219

Dear Mrs. Ngudle-Yafele

PERMISSION TO UNDERTAKE A MASTERS THESIS: A CASE STUDY OF LEARNER PERCEPTIONS ON FEEDBACK RECEIVED ON PERFORMANCE TASKS IN SELECTED SCHOOLS OF EAST LONDON DISTRICT

1. Thank you for your application to conduct research.
2. Your application to conduct the above mentioned research at Hudson Park and Sithembiso High Schools under the jurisdiction of East London District in the Eastern Cape Department of Basic Education (ECDBE) is hereby approved on condition that:
 - a. there will be no financial implications for the Department;
 - b. institutions and respondents must not be identifiable in any way from the results of the investigation;
 - c. you present a copy of the written approval letter of the Eastern Cape Department of Basic Education (ECDBE) to the District Directors before any research is undertaken at any institutions within that particular district;
 - d. you will make all the arrangements concerning your research;

building blocks for growth

Page 1 of 2



Ikamva eliqaqambileyo!

- f. should you wish to extend the period of research after approval has been granted, an application to do this must be directed to the Director: Strategic Planning Policy Research and Secretariat Services;
 - g. the research may not be conducted during the fourth school term, except in cases where a special well motivated request is received;
 - h. your research will be limited to those schools or institutions for which approval has been granted, should changes be effected written permission must be obtained from the Director – Strategic Planning Policy Research and Secretariat Services;
 - i. you present the Department with a copy of your final paper/report/dissertation/thesis free of charge in hard copy and electronic format. This must be accompanied by a separate synopsis (maximum 2 – 3 typed pages) of the most important findings and recommendations if it does not already contain a synopsis. This must also be in an electronic format.
 - j. you are requested to provide the above to the Director: The Strategic Planning Policy Research and Secretariat Services upon completion of your research.
 - k. you comply to all the requirements as completed in the Terms and Conditions to conduct Research in the ECDBE document duly completed by you.
 - l. you comply with your ethical undertaking (commitment form).
 - m. You submit on a six monthly basis, from the date of permission of the research, concise reports to the Director: Strategic Planning Policy Research and Secretariat Services.
3. The Department reserves a right to withdraw the permission should there not be compliance to the approval letter and contract signed in the Terms and Conditions to conduct Research in the ECDBE.
 4. The Department will publish the completed Research on its website.
 5. The Department wishes you well in your undertaking. You can contact the Director, Dr. Annetia Heckroodt on 043 702 7428 or mobile number 083 275 0715 and email: annetia.heckroodt@edu.ecprov.gov.za should you need any assistance.

DR AS HECKROODT

DIRECTOR: STRATEGIC PLANNING POLICY RESEARCH AND SECRETARIAT SERVICES



APPENDIX E

LETTER TO EAST LONDON DISTRICT OFFICE

1429 N.U.9

MDANTSANE

5219

23 July 2012

The Acting District Manager

Department of Education

East London District

MDANTSANE

5219

Re: Application for conducting interviews in schools of East London District

Dear Sir

I hereby request permission to conduct interviews in your district. I am pursuing a Master of Education degree at the University of Fort Hare. I am also an official in the Department of Education at the Head Office in Zwelitsha under the Directorate of Quality Promotion and Standards.

The title of my study is: **A case study of learner perceptions of feedback received on performed tasks in selected schools in the East London District.**

I hope that my application will receive your favourable consideration.

Yours faithfully

N.G. Ngudle-Yafele (Mrs)

APPENDIX F

INSTRUMENT

A case study of learner perceptions of feedback received on performed tasks in selected schools in the East London district in the Eastern Cape.

INTERVIEW SCHEDULE

Instrument 1

Grade 12 Learners (Mathematics)

July 2012

INTRODUCTION

1. Purpose of the interview: Is to find out about the learner perceptions on the feedback or comments they receive from the teacher after they do assigned work or answer a question. The purpose of feedback is to contribute to student learning through the provision of information about performance. In this study I would like you to share with me what you think of the feedback you receive from your mathematics teacher

2. Guaranteed Anonymity and Confidentiality: I will make sure that the information in this study is kept confidential. No names of the interviewee and the school will be identified. All the collected data will solely be used for nothing else but for the study. If names have to be mentioned, the pseudo ones will be used.

3. Permission to Tape: I will ask permission to use a tape recorder and support the request by explaining that this exercise is going to assist in collecting your responses accurately and to capture the information in order to avoid the misquotation as well as a reminder. I am going to replay the tape when it is needed to do so.

4. Any questions: Do you have any questions about this study and about your participation?

INTERVIEW QUESTIONS

SECTION A: BIOGRAPHICAL DETAILS

1. What grade are you studying?

2. What is your age?

3. Gender?

4. How many years have you been in this grade?

5. What subjects do you do?

6. What is your favourite subject?

7. How many educators teach you mathematics in this grade?

SECTION B: MESSAGES LEARNERS GET FROM FEEDBACK ABOUT THEIR PERFORMANCE.

1. Tell me about the comments you receive from your mathematics teacher when you answer a question in class.

2. In class when you give answers to the oral questions, how does the mathematics teacher respond to your answers?

4. What comments do you get from the teacher when you give a wrong answer in class. How does that make you feel? Why? Explain further.

4. How do you get motivated by the oral feedback/comments in mathematics?

5. Do you take notes on the oral comments given? How do you use them?

6. What kind of style does the teacher use when giving oral mathematics feedback/comments? Is this style effective or not? Why do you say so?

7. Now tell me about written comments: How useful are the written comments on

(a) Assignments?

(b) Tests?

8. What kind of written feedback do you get from your mathematics teacher that explain and give guidance to what is wrong in your answers which help you to understand the task better?

(a) Assignments

(b) Tests

9. How have the comments helped you understand the task better? Do you find the comments explain what is wrong with your work and explain how it can be corrected?

(a) Assignments?

(b) Tests?

11. What do you not like best about the teacher's written comments in your tests?

12. Do you always understand the written comments from the teacher? If you still do not understand, what do you do?

13. Tell me about comments that make you understand the work better: How do you feel when you receive that kind of feedback/comments?

14. Do you go to your mathematics teacher and ask for clarity in his or her comments? If yes, how is the response? If no, why do you ask for it?

15. What kind of feedback do you expect will make you feel motivated? Why does it make you feel motivated?

THANK YOU FOR YOUR TIME

**A CASE STUDY OF LEARNER PERCEPTIONS ON FEEDBACK RECEIVED ON
PERFORMED TASKS IN SELECTED SCHOOLS OF THE EAST LONDON
DISTRICT IN THE EASTERN CAPE**

Instrument 2

Portfolio Assessment Tool

Grade 12 Learners

June 2012

Category A: Comments that confirm that the learner has understood the task

Task 1	Examples

Category B: Comments that guide the learner how to perform the task

Task 1	Examples

**Category C: Comments that help the learner to check whether all tasks have
been done**

Task 1	Examples

Category D: Comments which help the learner in self-evaluation

Task 1	Examples

APPENDIX G

RAW DATA (DATA Set 1)

INTERVIEW TRANSCRIPTS

Focus group Data (AL1 & BL1)

One-on-one interviews (AL2 & BL2)

School A & B:

QUESTION 1

The comments you get or receive from your mathematics teacher when you answer a question in class.

AL1: When responding to the question the teacher does not correct you politely. If it happens that you have miscalculated or you got the answer wrong, she will refer to her favourites asking them to give the answer and then add by explaining to them what I should have done instead of focus on me who has a problem with the task. You end up hating yourself and get embarrassed

BL1: Our teacher will ask you to explain to the whole class how you arrive to the answer and wants us to be positive all the time because it is a challenging subject.

QUESTION 2

COMMENTS FROM THE TEACHER WHEN YOU GIVE ANSWERS TO THE ORAL QUESTIONS IN CLASS.

School A

AL1: When responding to the question the teacher does not correct you politely, if it happens that you have miscalculated or you got the answer wrong, she will refer you to her favourites asking them to give the answer and then add by explaining to them what I should have done instead of focus on me who has a problem with the task. You end up hating yourself and get embarrassed

BL1: Our teacher will ask you to explain to the whole class how you arrive to the answer and he will tell that he is doing this so that those who do not know the answer can get the information. And also if your answer is not correct sometimes you see your own mistakes in the answer you are giving because you become stuck in your explanation and then you will be corrected. By doing that he is trying to encourage us to take part in oral tasks

QUESTION 3

COMMENTS FROM THE TEACHER WHEN THE WRONG RESPONSE IS GIVEN IN CLASS AND THE FEELING IT MAKES

School A

AL1: The teacher gives you a shout and begins to ask you what is difficult in what is asked. This makes you feel not to like to do mathematics anymore and prefer to rather study mathematics literacy (ML) because the teacher for ML is totally different from the one we have for mathematics. We feel not to communicate with her. Sometimes she refers you in a very harsh way to her favourites to assist by teaching you to get it right

BL1: He does not make a comment as such except by asking from the class if what is happening on the board is correct or not. This also draws your attention as to say what I am doing now is not right or the step I am in now is not calculated correctly

QUESTION 4

HELP FROM COMMENTS GIVEN BY THE TEACHER AND HOW TO USE THEM

School A

AL1: My teacher's comments do not help me at all because they do not make me to feel fine, instead it makes you to look funny at other learners in class then you begin to lose focus and your self esteem is lowered and sometimes taken away, this then affect your marks when the formal task is done

BL1: His comments boost my self esteem and try to put more effort and have to make sure that I get it all right all the time. This encourages me to participate in the class discussions.

His comments are useful in the sense that I make sure I practise mathematics every day and bring up more questions to class for clarity and get a better understanding

QUESTION 5

GETTING ORAL FEEDBACK ON MATHEMATICS TASK IN CLASS

School A

AL1: Our teacher will go around the class and check what we have written in our books, but she only look for her favourites and then walks to the chalkboard and explains what she is looking for in the task, when you ask her to repeat a certain step she will do so but will never BE THOROUGH and will never do so nicely because she wants us to understand at the same time yet we are not the same in class and thereafter comes the shout.

BL1: The teacher will ask us to go to the board and calculate for the whole class, I panic a lot because other learners will look for the mistakes I will have and make silly comments and correct me, but the teacher will let you finish and show where you got it wrong and then explain what you should have done to get it right.

QUESTION 6

THE USE OF WRITTEN COMMENTS ON:

(a) Assignments

School A

AL1 said: I cannot say there are comments written in our assignments because the teacher never returns them back. When we ask how we have performed, our teacher will tell us that we have copied the work. What we do when we are given an assignment, we form up groups and discuss the task and put in flesh on what we should write about, then we go and write, surely some answers will be the same, but when we try to explain to her, she does not want to listen to us except for the word, copying. Funny enough we will have the marks that we see during the term.

BL1: He writes something like ‘well done; this is great; need an improvement; try harder; it is well organised but you couldn’t answer some questions properly and this is the way of doing it’. When you have failed the task, he will say you have to pass mathematics and we will all try to our best to get it right.

(b) Tests

AL1: There are no comments written in our scripts except a mark, we get them verbally in class. In fact what she does, she calls your name and reads the mark you got at the front. If you happen not to have performed well in the test, she will begin to tell you that you are not studying and you are going to fail at the end of the year. The teacher will go through the script with you orally in the class and bear in mind that you are not taking any notes for the wrong answers and you are unable to capture all what she is saying to you and the pace is fast and the queue is long. If you are slow in understanding what she is explaining she will continue with the shout and then you begin to lose focus, as she explains she gains anger and will call the next one and leave you half way and you must remember that you are not writing anything down as she talks to you, you have to keep all that in mind, and this does not mean that you understand all what she is saying.

The mere fact you got it wrong you had a problem with it, now how do you begin to understand without writing in the book so that when you are at home you are able to have a look at it and try to practise to get it right next time. The teacher does not give

us a memorandum after the test is written and marked and yet she expects us to pass.

Of course the time will not be enough for the whole class and when the period is over, for those who have not been called yet they have to go to the staff room to see their marks and hear what the teacher will say, we do not like that because now you will be shouted in front of other teachers and look stupid and lose focus.

AL2: The teacher will ask you why did you calculate like this but will never say you were suppose to do like that instead she will tell you that she taught you this and begin to shout at you.

QUESTION 7

WAYS OF USING THE MATHEMATICS TEACHER'S WRITTEN COMMENTS IN THE WORK BOOK

AL1: It is very much impossible to use the comments you are getting from my mathematics teacher because they are not written down. Those comments that you manage to collate on your own are not enough, it is here and there because the pace was fast and you get lost on the way.

BL1: He [teacher] writes corrections next to the side of the wrong answer to show how you should have done it. There are corrections we do that we got from the teacher; we are able to refer back to them when we got stuck with our work and use them.

QUESTION 8

MATHEMATICS COMMENTS IN (a) ASSIGNMENTS EXPLAINING WHAT IS WRONG AND GIVE GUIDANCE TO CORRECT AND HELP TO UNDERSTAND THE TASK BETTER

AL1: We do not get the assignments scripts back and therefore could not comment on that. All we know is that we have copied and then followed by the shouting.

BL1: If you have given the wrong answer, his comments will make me realise that I have to read and understand the question before attempting to answer it. To the wrong answers he gives a guideline in our books on how to answer the question.

QUESTION 9

USEFUL FEEDBACK ON TESTS THAT HELP TO UNDERSTAND THE TASK BETTER

AL1: It can be very interesting if it is not done by our mathematics teacher. I cannot ask the teacher to explain for me if I do not understand because if you find time and go to the staff room for clarities, she is explaining through questioning and when got

stuck and unable to answer the question correct it becomes a problem. This sounds funny because she should expect me not to get all answers right the mere fact that I asked to see her it means there is a problem I cannot solve on my own. I rather stick to my classmates then if they can't help with other work, then I will have that problem for the rest of the year.

BL1: Whenever I get a question similar to the previous one I always remind myself about his comments I heard before and try to calculate right and try by all means not to go wrong.

QUESTION 10

THE TEACHER'S COMMENTS THAT ARE LIKED BEST IN THE TEST

School A

AL1: At times the teacher will motivate us by saying - we must give ourselves time to study and form up groups and try to understand mathematics.

AL2: [No response given]

QUESTION 11

THE TEACHER'S WRITTEN COMMENTS ON TESTS THAT I DO NOT LIKE BEST

AL1: We do not like the general comments she makes and yet our mistakes are not the same followed by shouting. And why is she always angry with us when she has to explain when the majority of the class does not understand what she is trying to explain.

If one or two learners have done the homework she will shout the whole class.

BL1: If he says I have taught you this before how come you do not know now, I feel embarrassed for not remembering it

QUESTION 12

THE COMMENTS THAT MAKE THE UNDERSTANDING MUCH BETTER AND THE ACTION TO TAKE IF NOT YET UNDERSTOOD

AL1: I feel great when the teacher talks about ways of getting things right and methods of studying mathematics. I realise that what I thought is difficult was not and become interested and an enjoyable subject, when you get back home you find yourself fresh and good and the power of dealing with your work.

BL1: For an example if the comment says, explain or evaluate, I just go to the teacher and ask what it means so as to get a better understanding of what I have to do about it.

QUESTION 14

How do you find clarities from the mathematics teacher and how is the teacher responding?

School A

AL1: No, there is no way that you can go to her because the only place to see is in the staff room, you don't want to be embarrassed in front of other teachers, rather stays far from her if you will not be able to come with correct answers when asked.

BL1: Whenever you go to the teacher he is always available and willing to assist when he has time to do so.

QUESTION 15

AN EXPECTED FEEDBACK THAT BUILDS UP MOTIVATION AND THE REASONS FOR BEING MOTIVATED

School A

AL1: Sometimes she will ask us to write about ourselves. When she includes us in the calculations in class asking us to give help with the answer so as to understand better.

Most of the time it is not easy to communicate with her- this leads us to lose interest in the subject. She is telling us about finishing the syllabus yet we are left behind and maybe we understand 40% of the work covered, this does not make sense because we need that 60% as well, meaning you cannot revise something you did not understand, this is causing her to start afresh and teach us hence she shouts at us and become angry because we cannot move in her revision.

BL1: If he can say; you have an ability to get level 7 for your final exam, this will make me to work much harder to get there at the end of the year. Or sometimes if he writes excellent or need more improvement; as learners we always doubt ourselves then it is encouraging when you hear something like that from the teacher which says yes "you can".

DATA SET 2
INTERVIEW TRANSCRIPTS (ONE-ON-ONE INTERVIEWS)

School A – AL 2

Age of respondent - 18 years

Favourite subject – consumer studies, because I understand more, it is a daily use subject, is taught by the best teacher, the subject is more practical, and lastly because of the courage I get from teacher.

Number of teachers for mathematics in my class = 1 teacher maths

School B – BL2

QUESTION 1

The comments you get or receive from your mathematics teacher when you answer a question in class.

School A

AL2: Her comments are always negative, she will say something like you are not studying, you then become afraid of her, she says you are not serious about your work, why are you not answering based on questions,

Her comments affect the other subjects because you end up losing focus, scared by comments.

We do not understand why she is doing this, we do not know the answer this because we have come to school to learn and we not perfect all the time. She has her favourites, she is not checking our work except for those she love, by doing so we end up not doing our work and when we have done it we do not know whether the answers we have given are wrong or right.

AL2: Commented that the treatment is not the same because the teacher is guided by marks, the poor you perform in the task the more the ignorance towards you.

There is no comment that you get from the teacher except the show of a happy face, but when you are wrong the teacher will get disappointed and begin to tell you that you do not care about your work because you are suppose to know this, I have taught you this before.

School B

BL2: The teacher will tell you that your answer is wrong and will show you where your problem is so that you get it right next time. He will tell you to try and work harder than to let you down as a result this will make you to go to other learner after

school for some help so that next time you get it right and always remember how to do it.

QUESTION 2:

Comments from the teacher when you give answers to the oral question in class.

School A

AL2: The teacher does not respond in a polite way, she asks you to go to board, if she does not understand what you are saying, she will ask one of her favourites to take over and do the task on the chalkboard, she listens better to her favourites, she does not point those learners who are not her favourites to say something in class.

If the answer is wrong, she will ask - what is that, why sitting only, this makes things more difficult, wanting to know more when trying to understand something.

Her comments are always negative, she will say something like you are not studying, you then become afraid of her, she says you are not serious about your work, why are you not answering based on questions.

Her comments affect the other subjects because you end up losing focus, you become scared by the comments she makes.

We do not understand why she is doing this, we do not know all the answers this because we have come to school to learn and we are not perfect all the time. She has her favourites, she is not checking our work except for those she love, by doing so we end up not doing our work and when we have done it we do not know whether the answers we have given are wrong or right.

School B

BL2: The teacher will tell you that your answer is wrong and will show you where your problem is so that next time you get it right. He will tell you to try and work harder than to let you down as a result this will make you to go to other learner after school for some help so that next time you get it right and always remember how to do it.

QUESTION 3

Comments from the teacher when the wrong response is given in class and the feeling it makes

School A

AL2: Her comments are negative in most of the time and this does not help me, it makes me not to feel right, it causes me to lose focus, it lowers my self esteem as she shouts at you. It does not encourages me to feel boosted in maths.

My teacher's reactions makes me feel embarrassed, she will not give me the correct answer instead she will say "I have told you this in grade 11 and there is no need to repeat it" This makes me feel that it means I do not deserve to be in this class and what is the use of doing grade 12 if I am like the way she is saying I am.

In grade 10 we started to experience a problem with this teacher, we asked for another teacher from the principal but she was the most qualified one and there is no one to be given, we cannot communicate with her, lose interest, banking/dodging her periods, lose opportunity to know maths, she goes fast and finish syllabus but we are left behind, we don't catch up at the same time, as time goes by more problem are packing up.

School B

BL2: Oh! I get very much disappointed when I do not answer correctly because our teacher is very much dedicated to his work and likes the subject and wishes that we could understand and live it. He will not give a funny comment except for saying, try to get it right next time.

QUESTION 4

Help from comments given by the teacher and how to use them

School A

AL2: What I see is that if her comments can be taken personally they will not help you at all, for an example if you see yourself as stupid it means you are going **nowhere** with the mathematics work. What is worse is that there is no marking taking place with the homework, so the efforts you have put on the work is not recognised at all.

School B

BL2: His comments help a lot because I do not want to be told the same thing next time. I always go to other learners and practice what I got wrong in class so that when it is asked next time I will know the right answer.

QUESTION 5

The way of getting oral feedback on mathematics tasks in class

School A

AL2: The teacher will go around checking only her favourite people and then goes to the board, she will not explain what is going on with the sum or task, she will ask

where exactly you don't understand, she does not explain thoroughly. At times you cannot say where exactly your problem with the task is, but that is not addressed by our teacher.

When she has asked something she expects you to know and understand what is happening as she is explaining.

School B

BL2: As we are calculating on the board he will say something or sometimes when he is doing a new chapter as he explains we will ask questions when needs be and when we do not know the answer he repeats what he has said to make sure that we understand and does not leave us behind.

QUESTION 6

The use of written comments on:

(a) Assignments?

School A

AL2: We do not receive our assignments back, when she is asked where they are, she will say we have copied the work but funny enough, we will have marks, even the scripts are not given back to us, it will be just the oral comments such as, and you have copied the work.

(b) Tests?

AL2: She will tell you that you have failed and will are going to fail even at the end of the year. The teacher will ask you why did you calculate like this but will never say you were suppose to do like that instead she will tell you that she has taught you this and begin to shout at you .You only see just marks; she will read your mark to the whole class. For the mid-year exams she goes through the script with you and does the same to all of us in the period, yet time is not enough because the period to do that is short. The problem is she hasn't explain where you have the real problem. She will say to underperformers – you should have done this, why, this is confusing. She will then get angry as she pages your script and put yours aside and calls another one. There is absolutely nothing written down.

Probing: Do you have time to write down as she explains?

There is absolutely no time to do that and to refer to, she takes the scripts & question papers back, there is no memo given to us, and it is becoming your own problem.

School B

BL2: The comments he writes in our test books helps because you are able to see where your problem is and how to correct your mistakes you have made in one of

the questions, because he writes the answer next to incorrect step, so it becomes easy to identify the problem you have.

Too many mistakes makes you to lose more marks, he specify wherever you struggle.

- If you have done well, work harder
- Well done- keep it up to get better
- Motivates- try to study/practice more

QUESTION 7

Ways of using the mathematics teacher's written comments in the work book

School A

AL2: You will never find any comments in the work book and therefore there is nothing to refer to when you are alone at home and want to remind yourself about something you did in class. Also the teacher does not even look at what we have written in our homework books and therefore we see no need to do the homework.

School B

BL2: The teacher underlines where the problem is and then writes the correct thing, then when you are given a home work it is easy for you to get a reminder of how it was done in class because there are corrections in your class book.

QUESTION 8:

Mathematics comments in (a) assignments explaining what is wrong and give guidance to correct and help to understand the task better.

School A

AL2: Firstly, understand that our workbooks for assignments are not returned back to us. We do not know how we have performed in the task we do not have comments written down by our teacher. From the oral comments she makes we are unable to use them at a later stage because it is incomplete, we could not finish what we have managed to collate what you have been told as she was explaining here and there in a very fast pace and you lose a lot of information.

QUESTION 9

Useful feedback on tests that help to understand the task better

School A

AL 2: There are no comments written except a mark in the script,

Probing: If there are no comments written, are oral comments helping you?

No, because she first starts shouting and then become angry, then you lose what she has said before as you become afraid of her.

Probing: As you have said earlier on that she invites you to the staff room for consultation when the oral feedback of your script is given? Do you go to the staff room to ask for clarity?

No, I don't go to the staff room, in most cases I find maths interesting but on the way the teacher gives me problems, she will say something that needs you to answer, if you cannot give the correct answer she starts becoming angry because I come to her to get answers, explains through questioning and then we end up not going to her anymore.

QUESTION 10

The teacher's comments that are liked best in the test

School A

AL2: All the comments she gives to us are always negative in most of the time. I do not like them at all She does not bring the books to class, but at times she motivates by saying we should try by all means, she says she cannot be with us all the time, she explains nicely and becomes humble to us but these times to be like are very few.

QUESTION 11

The teacher's written comments on tests that are not liked best

School A

AL 2: They are not specific; she is generalising, and then talks to the whole class as if others have done the same mistake, then starts shouting at you and asks if you want to pass this grade for not.

School B

BL2: Comments are not useful if they are the same to all of us and yet marks are not equal. If marks are 39/40 and the other one gets 38/40 and the teacher 's comment is the same to both of us, this makes me crazy because the marks are not the same and I expect a better comment like outstanding.

QUESTION12

The comments that make the understanding much better and the action to take if not yet understood

School A

AL2: No, I do not understand her in most of the time, our mother tongue with our teacher is not the same, she speaks differently from the way we speak English, her pronunciation is far different from ours if the word is not said right we will not understand, we do not have time to write them down, we can't refer to the oral comments and won't be able to remember as you learn more subjects and have to focus to other teachers. When comments are given they are not written on the board, she explains by word of mouth only, you will never see a red pen in your book. No, we are not given an opportunity to write down something, if you have no basics in maths you can't catch anything.

School B

BL2: Comments like, you have to love mathematics in order to understand it, you must practise it daily so as to know it, form up groups to make the work easier, be curious all the time.

QUESTION 13

Comments that make you understand the work better. The feeling you have when receiving that kind of feedback

School A

AL2: It feels great. You see it that it was not that difficult and becomes enjoyable and interested, when you get back home you feel fresh and good.

Sometimes when we argue in class about the wrong and right answer he asks questions on the method you have used, then he shows you other more methods to get to the answer in a simpler way.

QUESTION 14

Finding clarities from the mathematics teacher and how the response is

School A

AL2: I rather not ask for clarities because the minute I got stuck with the answer it is the time of inviting for the shout because she does not expect any wrong answer from you yet you are struggling with the work, you have not understood it before and how can you get it right now without any explanation given.

School B

BL2: You first have to identify the problem you have and in which part of the work, for one learner who came to him and ask for clarity, the teacher will also explain for the whole class because he knows that there are other learners who might not know this but scared to come to him. He also believes in one-to-one consultation because he wants to accommodate those who are shy to ask or speak in the class room.

QUESTION 15

An expected feedback that builds up motivation and the reasons for being motivated

School A

AL2: I would like her to talk to me in a proper way instead of making noise in my ears like a shout she does and be given a chance to write something down for me to make a reference so as to be able to revise at home and with other learners.

If the revision can be done on the chalkboard coupled with explanation it would be very much motivating, I think this is the best way of learning mathematics where you see how to come to the end of the calculation and which steps you were not doing right. Or if an overhead/data projector can be used to save time and then the explanation is done. It will be much better also if the written answers for the tasks we struggle in are supplied to us so that when we practice at our own we will be able to refer to them.

School B

BL2: When you get a highest mark than the others in class for an example 18/20, a comment must be different from the one who got 17/20 because to be the highest by one mark is a big thing and one mark costs a lot.

Sometimes he will say, I know your potential, you can do better, there is still room for improvement, and there is still time to improve.

**APPENDIX H: RAW DATA ON PORTFOLIO EVIDENCE FOR SCHOOL
A**



Grade 12 (U)

02 March 2012

Investigation

Mathematics

1(a) They all have a shape and they are traditional.

(b) They were made in the olden days and every thing contains its own shape.

2(a) (i) $A = \pi r^2$
 $= \pi 5^2$
 $= 78.54 \text{ m}^2$

(SCIENCE)				
SCHOOL BASED MODERATION	1	2	3	4
SIGNATURE				
DATE	13/03/2012			

(ii) $A_r = l \times b$

$= 8 \times 6$

$= 48 \text{ m}^2$

(iii) $r^2 = x^2 + y^2$

$r^2 = 5^2 + 5^2$

$r^2 = 50$

$r = 5\sqrt{2}$

$A_s = r^2$

$= (5\sqrt{2})^2$

$= 50 \text{ m}^2$

(a) Their sizes are different even though their diagonals or diameters are all 10m.

3. S.A (circumference) $= 2\pi r$
 $= 2 \times 3.14 \times 2.5$

26/40

27/40

27/40

Model/Steel
19/04/2012

Mathematics

Design Project.

Grade 10 (a)

02 March 2012

Task 2

H.O.D. (SCIENCE)				
SCHOOL BASED MODERATION	1	2	3	4
SIGNATURE				
DATE	02/03/2012			

Description of can	Height h (mm)	DIAMETER d (mm)	$\frac{h}{d}$
Play (440ml)	140mm	52mm	$\frac{140}{52} = 2.69$
Liqui Fruit (250ml)	139mm	45mm	$\frac{139}{45} = 3.09$
Play (125ml)	125mm	42mm	$\frac{125}{42} = 2.98$
Iron Brew (200ml)	105mm	47mm	$\frac{105}{47} = 2.23$

12

Task 3

Average = $2.692377692 + 3.088888889 + 2.976190476 + 2.234042553$
 $= 10.99$

Task 4

The height and diameter

Task 5

$V = \pi r^2 h$
 $S = 2\pi r^2 + 2\pi r h$
 $V = 500 \text{ cm}^3$
 $S = \pi \frac{d^2}{2} + \frac{200}{d}$
 $r = \frac{d}{2}$
 $\frac{V}{\pi r^2} = h$

$\frac{500}{\pi r^2} = h$
 $S = 2\pi r^2 + 2\pi r \times \frac{500}{\pi r^2}$
 $S = 2\pi r^2 + \frac{2 \times 500}{r}$
 $S = 2\pi r^2 + \frac{1000}{r}$
 $= 2\pi \left(\frac{d}{2}\right)^2 + \frac{1000}{(d/2)}$
 $\therefore S = \frac{2\pi d^2}{4} + \frac{2000}{d}$

Assignment

Question 1.

[Signature]

19/04/2013

Assignment

1.1. Domain $(-\infty; \infty)$ ✓
Range $(0; \infty)$ ✓

1.2. Domain $(-\infty, \infty)$
Range $(0, \infty)$ ✓

1.3. Domain $(-\infty, \infty)$ ✓
Range $(0; \infty)$ ✓

1.4. It is a function because the vertical line test touches the graph at one point.

1.5. function Domain $(-\infty; \infty)$ ✓
Range $(0; \infty)$ ✓

2
b) function Domain $(-\infty; \infty)$ ✓
Range $(0; \infty)$ ✓

c) function Domain $(0; \infty)$ ✓
Range $(0; \infty)$ ✓

1.6. (a)

x	-3	-2	-1	0	1	2	3
$-(2)^x$	$-\frac{1}{8}$	$-\frac{1}{4}$	$-\frac{1}{2}$	-1	-2	-4	-8
$-(\frac{1}{2})^x$	-8	-4	-2	-1	$-\frac{1}{2}$	$-\frac{1}{4}$	$-\frac{1}{8}$

RAW DATA ON PORTFOLIO EVIDENCE FOR SCHOOL B

Classwork

Maths

3

$$\textcircled{a} \sin 20^\circ \cdot \cos 40^\circ + \cos 20^\circ \cdot \sin 40^\circ$$

$$\textcircled{b} \cos 40^\circ \cdot \cos 20^\circ - \sin 40^\circ \cdot \sin 20^\circ$$

$$\textcircled{c} \cos 3^\circ \cdot \sin 53^\circ + \cos 53^\circ \cdot \sin 153^\circ$$

4

$$\textcircled{a} \sin(150^\circ + \theta) = -\sin \theta$$

$$\textcircled{b} \cos 260^\circ = -\cos \theta$$

Solutions

3.

$$\textcircled{a} \sin 40^\circ \cdot \cos 20^\circ + \cos 40^\circ \cdot \sin 20^\circ$$

$$= \sin(40^\circ + 20^\circ)$$

$$= \sin(60^\circ)$$

$$= \frac{\sqrt{3}}{2}$$

Good

$$\textcircled{b} \cos 40^\circ \cdot \cos 20^\circ - \sin 40^\circ \cdot \sin 20^\circ$$

$$= \cos(40^\circ + 20^\circ)$$

$$= \cos(60^\circ)$$

$$= \frac{1}{2}$$

$$\textcircled{c} \cos 3^\circ \cdot \sin 53^\circ + \cos 53^\circ \cdot \sin 153^\circ$$

$$= \cos 3^\circ \cdot \sin 53^\circ + \cos 53^\circ \cdot \sin(180^\circ - 27^\circ)$$

$$= \cos 3^\circ \cdot \sin 53^\circ + \cos 53^\circ \cdot \sin 27^\circ$$

$$= \sin(3^\circ + 53^\circ)$$

$$= \sin(56^\circ)$$

$$= \frac{4}{5}$$

Very Good

$$4 \textcircled{a} \sin(150^\circ + \theta) = -\sin \theta$$

$$\text{LHS: } \sin(150^\circ + \theta)$$

Classwork

25 February 2022

1. Deposited R8000 into a savings account for one year at an interest rate of 13,5 % p.a. compounded quarterly
- (a) Calculate the total amount of money accumulated in the savings account at the end of one year
- (b) Calculate the effective annual interest rate

Solution

(a) $A = P(1+i)^n$

$A = 8000(1 + \frac{13,5}{100})^4$

$A = 8000(1 + 0,135)^4$

$A = 8000(1,035)^4$

$A = 8000 \times 1,141989446$

$A = 9135,915568$

$A = 9135,92$

(b) $(1+i) = (1 + \frac{i^{(m)}}{m})^m$

$1+i = (1 + \frac{0,135}{4})^4$

$1+i = (1 + 0,03375)^4$

$1+i = (1,03375)^4$

$1+i = 1,141989446$

$i = 1,141989446 - 1$

$i = 0,141989446 \times 100\%$

$i = 14,1989446\%$

$i = 14,20\%$

Good attempt!

$= 14,19894459\% \approx 14,20\%$

Be careful!

