THE EFFECTS OF CONDONATION ON THE PROMOTION OF SENIOR PHASE MATHEMATICS LEARNERS INTO THE FET PHASE

by

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Declaration

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I, Yudvir Bhagwonparsadh, declare that the dissertation hereby submitted for the MEd degree at the University of the Free State is my own, independent work and has not previously been submitted by me at another university/faculty. I furthermore cede copyright of the dissertation in favour of the University of the Free State.

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Dedication

This dissertation is dedicated to my family, Siam-vir Bhagwonparsadh, Sai-vir Bhagwonparsadh, my wife, Keisha, and my parents, S and B Rajkumar, for the unconditional love and support that they have bestowed upon me throughout my studies

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Abstract

The purpose of this study was to investigate the effects of condonation on the promotion of senior phase mathematics learners to the FET phase in a selected combined school situated in the Amajuba district in Newcastle in the province of KwaZulu-Natal. The intention of this investigation was to suggest possible learning support strategies teachers could use to improve the performance of condoned mathematics learners in the FET. These learners were assisted to reach the FET phase, despite their not meeting the academic pass requirements; however, they did not receive any academic support to overcome their gaps in knowledge. The literature study was conducted on pertinent theories and the end results of prior studies involving similar concerns and pragmatic research.

The researcher used an exploratory case study strategy, that is, a qualitative method in a case study paradigm to investigate the condonation policy and the effects thereof on mathematics by conducting interviews with learners in focus groups and with mathematics teachers. Open-ended questions were compiled for individually interviewing the mathematics teachers and the two focus groups of learners. The data analysis entailed the collation of all the data collected from the participants. The data were transcribed into text, read, coded and categorised, after which themes emerged. A thematic data analysis approach was then followed to analyse the data.

The findings suggest that condoning senior phase learners and promoting them to the FET phase result in their not mastering the foundational knowledge required to learn FET mathematics. Hence, condoning senior phase learners in mathematics results in their accumulating gaps in knowledge. Consequently, they struggle to achieve good performance levels in FET mathematics. This may lead to condoned learners failing mathematics in the FET phase, dropping mathematics in favour of the easier mathematical literacy or dropping out of school before reaching Grade 12.

Furthermore, the findings of the study suggest that condoned senior phase mathematics learners need to undergo an academic support programme to be retaught the foundational knowledge they have not acquired as a result of condonation. They need to be retaught the basic mathematical concepts by receiving academic support outside the normal school day. An academic support programme is an individualised learning support programme for each condoned mathematics learner who is struggling to achieve good performance levels in FET mathematics. The individual

support programme for mathematics comprises various academic teaching and learning support strategies the subject teacher should use to help improve learners' performance in mathematics. The success of a learning support programme depends on the collaborative relationships stemming from a nurturing teacher, involved parents and positive discipline among learners in group teaching within supplemental learning classes.

Keywords: case study; condonation; individual support plan; learning support strategies; progression; improved learner performance in mathematics.

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List of abbreviations

CAPS	Curriculum and Assessment Policy Statement
DBE	Department of Basic Education
FET	Further Education and Training
ISP	Individual Support Plan
NSC	National Senior Certificate
SBST	School-Based Support Team
SIAS	Screening, Identification, Assessment and Support
TVET	Technical and Vocational Education and Training
Umalusi	Council for Quality Assurance in General and Further Education and Training

Chapter 1: Introduction and background of the study

1.1 Introduction

International studies have established the benefits of automatic progression for learners (see Chohan & Qadir 2011; Okurut 2015; Tani & George 2019). Pragmatic arguments from studies done in various countries view condonation as the remedial academic assistance of learners to achieve acceptable levels of performance (Brophy 2006:4; Stott, Dreyer & Venter 2015:89). This study seeks to investigate the effects of the condonation of mathematics learners in the South African context.

In 2016, the Department of Basic Education (DBE) introduced the Special Condonation Dispensation policy for 2016 to 2017 (DBE 2016:1). This resulted in condoning learners in mathematics and promoting them to the Further Education and Training (FET) phase – learners who, otherwise, would have failed because of not meeting the minimum pass requirements (DBE 2016:2). As a consequence of this action, the condoned learners did not master the foundational skills in the senior phase needed to take on mathematics and mathematical literacy in the FET phase (Reddy & Nair 2016:116).

Condonation allowed learners to be advanced throughout their school career and eventually reach Grade 12 without mastering basic skills and knowledge (Lumadi 2014:786). In other words, learners' deficits in knowledge continued to grow with them into the FET phase and resulted in many of them performing poorly in the subject matter. To assist learners to pass FET mathematics, they need to be academically supported (Kader 2012:112).

Condoned mathematics learners need to be supported to overcome their barriers to learning mathematics, thereby mastering the content of the subject that they did not pass in the senior phase (DBE 2015). The *Screening, Identification, Assessment and Support* (SIAS) policy (DBE 2014:54) allows for the tracking of learners who are at risk of failing so that an intervention support programme may be provided to overcome their barriers to learning. However, this was not done for mathematics, and consequently, many learners may have failed or dropped out of school after Grade 9, as the cohort that had started schooling was much larger than when they finished Grade 12 (DBE 2015:23).

1.2 Background

The problem of condoning senior phase mathematics learners to the next grade without acquiring the foundational mathematics skills has resulted in learners struggling to learn the new content in the FET phase. Reddy and Nair (2016:109) contend that condoned learners have acquired learning deficit gaps in mathematics because they have been assisted to reach the FET phase (without receiving support) and therefore find the new content challenging. This has resulted in learners failing in the FET phase. Many schools do not want a high failure rate, especially in Grade 12 (Statistics South Africa 2015). Therefore, the condonation of learners has become the new norm and now makes it almost impossible for a school not to apply it. Therefore, schools now simply "pass one, pass all" as a policy; in effect, all learners are condoned in mathematics regardless of their competencies in the subject matter (Davids & Waghid 2017:24).

Condoned learners end up failing the grade once they enter the FET phase and subsequently are "automatically" advanced into the next grade by the progression policy (Kalenga & Fourie 2012:34). "Progression" is defined as the upward movement of learners from one grade to the next, despite not having complied with all the requirements of promotion (DBE 2011a: xi). In other words, learners have been condoned up to Grade 12 based on age and not on their academic abilities (Khetoa 2016:81). So, learners are placed in the next grade without having acquired the basic mathematical content (Lumadi 2014:786).

According to the 2019 Trends in International Mathematics and Science Study, 63% of learners have not acquired basic mathematical knowledge. Moreover, these learners achieved an average score of 389 in this study, which is one category below the lowest category that measures "some basic mathematical knowledge" (Mullis, Martin, Foy, Kelly & Fishbein 2020:4). In other words, South African Grade 9 mathematics learners have acquired less than "some basic mathematical knowledge" in the senior phase. This does not bode well for learners who want to achieve a good pass in the grade.

The results of the 2015 senior phase assessments continued to show unsatisfactory levels of achievements in mathematics because the majority of Grade 9 learners lacked foundational knowledge (DBE 2016:51). Consequently, many learners would be retained. To minimise a high failure rate, a mark adjustment dispensation policy was approved by the DBE (2015, 2016). This

policy assisted in the movement of underperforming learners into Grade 10 for the years 2016 and 2017. First, a percentage mark adjustment was done by adding up to a maximum of 6% to the learners' final marks in 2016 (DBE 2016:1). In 2017, a maximum of up to 5% was added to the learners' final marks to meet the newly amended pass percentage requirement of 20% and 30% for them to be promoted to Grade 10 (DBE 2016:1). Consequently, learners acquired learning deficit gaps in mathematics and were pushed into the FET phase, carrying these barriers that would affect them later on (Letshwene 2019:22; Reddy & Nair 2015:112).

Condoned learners should undergo a support programme to overcome their barriers to learning in order to catch up with the lost content in the FET phase (DBE 2011:9). Such a support programme involves "structured interventions" given to learners within specified time frames (DBE 2010:7). A learner's barrier to education is defined as any difficulty learners may experience, preventing them from acquiring the learning content (DBE 2010:6). Learners who lack the foundational knowledge in mathematics struggle to learn mathematics and mathematical literacy in the FET phase, as mathematics is hierarchal (DBE 2010:12).

To assist learners with learning difficulties, the DBE has national guidelines such as *Education White Paper 6: Special Needs Education* (DBE 2001), containing the national policy on inclusive education, and the SIAS policy (DBE 2014). These policies provide guidelines on using academic strategies to support learners who are struggling with the learning content. Seemingly, these policies are not as effective as has been foreseen. According to various scholars (e.g. Davids & Waghid 2017:23; Hoadley 2012:194), although not much academic learning support is provided to underperforming learners, the performance of these learners may improve should they receive assistance from their teachers.

Consequently, the study sought to investigate the effects of condonation on the promotion of senior phase mathematics learners, who were not academically supported, to the FET phase. The study also sought to recommend possible learning support strategies teachers may use to help condoned learners improve their performance levels in mathematics and mathematical literacy in the FET phase.

1.3 Problem statement

Academic learner support programmes consist of additional teaching material, holiday classes and after-school programmes and differentiated teaching strategies to address the specific performance levels of learners (DBE 2020:20). Reddy *et al.* (2019:4) refer to learning support consisting of additional remediation, curriculum instruction, academic teaching of learners in groups and other related psychological, medical and social support services to prevent learning difficulties among learners.

Remediation takes place when learners have not learnt the subject content and require reteaching (Oktavianty, Haratua & Anuru 2018:4). Mavuso (2014:455) broadly defines learning support or academic support as a collective action to support learners with the use of intervention programmes, either by curriculum differentiation or adaptation, and referring learners to other stakeholders for support. According to Hoadley (2015:194) and Davids and Waghid (2017:23), the learning support provided to underperforming learners by the DBE is minimal; therefore, many learners struggle to learn. Mahlo (2013:301) points out that learners with learning difficulties in mainstream education do not receive academic support; should they receive it, these learners (and teachers) will benefit from it in the classroom. However, little is acknowledged on the effect of less academic support from the subject teachers in the new grade.

The aim of this study was to investigate the possible effects of condonation on the promotion of senior phase mathematics learners to the FET phase at a selected secondary school in the Phumelela circuit in KwaZulu-Natal. Moreover, the intention was to identify probable learning support strategies that mathematics teachers may implement to improve the performance of condoned mathematics learners in the FET phase.

1.4 Research questions

1.4.1 Main research question

The main research question is: What are the effects of condonation on the promotion of senior phase mathematics learners to the FET phase?

1.4.2 Research sub-questions

The following sub-questions guided the study:

- How does the condonation and promotion of Grade 9 learners to Grade 10 affect their mathematics performance?
- What are the perceptions on condoning learners and promoting them to the FET phase without providing them with learning support?
- How can condoned learners in the FET phase be academically supported to improve their mathematics performance?

1.5 Research objectives

The objectives of the research were to:

- explore how the condonation and promotion of Grade 9 learners to Grade 10 affect their mathematics performance;
- examine teachers' perceptions of condoning learners to the FET phase without providing them with learning support; and
- determine how condoned learners in the FET phase should be academically supported to improve their mathematics performance.

1.6 Theoretical perspective

A theoretical perspective provides a lens through which a researcher will interpret the knowledge gained from a study (Creswell & Creswell 2018:177). Theories benefit the understanding of the social approaches, performance, relations, behaviour and obligations of teachers and learners at schools in the realisation of institutional outcomes. The theoretical perspective provides a basis for the researcher's thinking and understanding of the research, as well as the planning and defining the concepts and theory that are relevant to the study (Grant & Osanloo 2014:13). It allows the researcher to recreate the opinions on the subject under review and "thus frames the work, assigning and enabling dialogue between the literature and the study" (Pule 2019:8).

The study drew on the social constructivist approach to learning that had previously been used in other studies related to the teaching of mathematics in schools. In Chapter 2, a detailed literature

review presents an analytical outline of the social constructivist theory, as it is intended to be used in the empirical study.

Social constructivists are of the belief that learners generate their own knowledge by sharing their subjective experiences among themselves in a social environment that is relative to time and space (Creswell & Creswell 2018:48; Pritchard & Woollard 2010:34). According to Fosnot (1996) and Doolittle (1999), the constructivist learning theory focuses on learners actively building their own knowledge from their experiences. The researcher postulates that focus group interviews with learners and teachers may reveal the effects of condoning learners in mathematics and suggest possible academic intervention strategies to support them in the FET phase.

Au (1998:300) mentions that learners acquire knowledge through learning opportunities created by the facilitator. When new knowledge has been gained, changes take place in the learners' minds (Badie 2016:292). This new knowledge that has been constructed is influenced by each learner's historical, cultural and social background (Au 1998:301). Within the milieu of these influences, learners in a classroom should be able to work together in smaller groups while receiving learning support from the facilitator. This also is an opportunity for learners to actively assist one another to master the subject content with which they are struggling. Therefore, the study uses the social constructivist theory as a guide to investigate the effects of condonation on the promotion of senior phase mathematics learners to the FET phase at a school in the Phumelela circuit.

1.7 Research methodology and design

1.7.1 Research methodology

The research methodology adopted is a qualitative research design because it focuses on the natural setting, that is, the classroom where the participants interact (see Creswell 2016:53). An exploratory qualitative study is used, which will be inductive in nature. Using an exploratory qualitative study will allow the researcher to investigate the condonation policy and the effects thereof on mathematics by conducting focus group interviews and interviewing the subject teachers, as not much research has been done on the effects of the condonation policy in the South African school context. Creswell (2016:54) mentions that this method will also allow the researcher to focus on making meaning of the phenomenon under study.

The researcher will use inductive reasoning when analysing the data to make up a general theory to explain the condonation of learners in mathematics (see Creswell 2016:55). The condonation of senior phase mathematics learners and the effects thereof will be reviewed by conducting interviews with mathematics and mathematical literacy teachers as well as two focus groups of learners by posing open-ended questions to them. Open-ended questions allow research participants to share their experiences of the phenomenon under review (Creswell & Creswell 2018:6). The researcher will pay close attention to the feedback from the focus groups of teachers and learners in order to improve his understanding of condoning mathematics learners when they are not competent for the new grade.

1.7.2 Research design

The research design was a case study. A case study can be defined as a "bounded entity" by date and time (Creswell 2016:81). The years under review are 2016 and 2017. The case study was exploratory in nature. The purpose of this type of case study is to investigate the circumstances in which the interventions have been assessed, which do not have any specific end results (Creswell & Creswell 2018:82). Therefore, the study began with focus group interviews, followed by one-on-one interviews with the subject teachers. The researcher assumed that focus group interviews would allow the learners to remember detailed information and share their experiences on the phenomenon under review, which ordinarily they might not share in individual interviews (see Creswell 2016:95). This would allow the participants to build on one another's feedback, thus providing a detailed understanding of how the condonation policy had affected them.

Thereafter, the researcher conducted individual interviews with the subject teachers using open-ended questions. This allowed the researcher to investigate the teachers' beliefs, views and experiences of the phenomenon under review (see Creswell 2016:93). It was envisaged that the teachers might be able to provide solutions to learners struggling with the learning content. The researcher started the data collection process with the focus group interviews with learners and ended with the teachers to obtain a view of whether the qualitative data obtained were accurate or not.

1.8 Sampling

A research site is the location where research is conducted (Creswell 2016:36). The researcher purposively sampled a school situated in the Amajuba district in Newcastle in the province of KwaZulu-Natal. The sample school used is a full-service school that carries the authority to provide a wide range of support, including academic support to ensure that all learners actively learn at school. It was envisaged that this school would produce rich data on the phenomenon under review.

Purposive sampling under homogeneous sampling was used to select the sample participants from the school. The reason for using purposive sampling is to collect data from participants because they have specific characteristics (McMillan & Schumacher 2010:138). Purposive sampling is used to select participants for a study by using a set of criteria (Creswell 2016:85). In this study, the participants were learners who had been condoned in mathematics and then promoted to the FET phase, together with mathematics teachers who had experience of teaching and condoning learners.

The researcher interviewed the teachers individually. The condoned learners were selected and divided into two focus groups of five learners each. These learners were condoned in their Grade 9 mathematics and then promoted to Grade 10 for the years 2016 and 2017 respectively.

1.9 Data collection

The researcher generated open-ended questions for individually interviewing the mathematics teachers and the two focus groups of learners. The objective of using this type of questioning was to have a conversation with the participants about their experiences of the condonation policy and the effects thereof. The researcher wanted to gain insight into the participants' views, beliefs and ideas on this phenomenon and elicit possible solutions to the effects thereof (see Creswell 2016:93). Focus group interviews and semi-structured interviews were used as data collection instruments.

1.9.1 Focus groups

The sample size of each focus group depends on the homogeneity of the participants (Creswell 2016:198). If the participants are similar in nature, a small sample size will be sufficient to use in

the study (Creswell 2016:199). The sample learners shared similar experiences on having been condoned in mathematics in the senior phase; therefore, based on the resemblance of the population, a small sample size would be sufficient for the study. Consequently, five learners who were condoned in mathematics and promoted to Grade 10 were chosen for each focus group for the years 2016 and 2017.

1.9.2 Semi-structured interviews

The purpose of the semi-structured interviews was to gather in-depth information on the experiences of mathematics teachers with regard to the phenomenon under review (see De Vos, Strydom, Fouche & Delport 2011:348). As such, the researcher wanted to explore, through the eyes of the subject teachers, their experiences of condoning learners in the senior phase and promoting them to the FET phase. An interview schedule containing the list of questions was used, and a voice recorder was used to record the interviews.

1.10 Data analysis

The researcher collated all the data from the individual semi-structured interviews and open-ended focus group interviews. The data were transcribed to text and then read, coded and categorised, after which themes emerged. A thematic data analysis approach was followed to analyse the data.

1.11 The value of the research

The study sought to investigate the effects of condonation on the promotion of senior phase mathematics learners to the FET phase without academic support. Therefore, the study has the potential to benefit current and future learners and teachers when they provide academic support to condoned learners who were promoted to Grade 10. The study will also inform stakeholders of the effects of condoning learners without academic support. The participating teachers will benefit from the findings, implications and recommendations of the study, which can guide them to providing solutions to assist learners who are underperforming in mathematics and mathematical literacy in Grade 10. The study will also suggest ways in which teachers can improve on their implementation and consistency of academic support given to condoned mathematics learners.

The participating learners will benefit from the findings of the study because it will recommend to teachers how to provide good academic support to Grade 10 learners who have been condoned,

with the aim of improving the learners' academic performance in mathematics and mathematical literacy. The findings of this study are also intended to add value to current and further research on the effects of condonation on the promotion of senior phase mathematics learners to the FET phase without their having been academically supported.

1.12 Ethical considerations

The ethical considerations addressed in this research are briefly discussed in this section.

1.12.1 Permission

The researcher sought and received permission to conduct the research from the University of the Free State through the Ethical Clearance Office (see Appendix A). Permission for the research was also obtained from the provincial Department of Education, the district office and the school.

1.12.2 Informed consent

The participants were provided with a consent form (see Appendices E and F). Signing the consent form indicated their agreement to take part in the study. They were informed that they could terminate their participation at any stage of the study without negative consequences.

1.12.3 Anonymity and confidentiality

The researcher informed the participants that their identities would be kept confidential; therefore, their personal information would not appear in the research documents. Pseudonyms were used in the research document instead of the participants' real names (see Appendices E and F).

1.12.4 Protection from harm

Participation in the research took place during normal school hours while the school security guard was present to ensure the safety of the participants. This ensured that no physical harm could be done to the participants. Moreover, the research did not harm the participants mentally or psychologically because the questions in the interviews were aimed to protect the dignity and rights of the participants.

1.13 Layout of chapters

The study is divided into six chapters, as set out below.

Chapter 1: Introduction and background of the study

The first chapter presents the introduction to the study and provides the background of the research, the problem statement, research questions, aims and objectives, the theoretical framework, the research methodology and design, particulars about the sampling, data collection, data analysis, the value of the study, ethical considerations and the layout of the thesis.

Chapter 2: Theoretical perspective

The theoretical perspective of Vygotsky's social constructivist theory is discussed in this chapter to investigate the effects of condonation on the promotion of senior phase mathematics learners, without being academically supported, to the FET phase.

Chapter 3: Literature review

In this chapter, literature that is regarded as relevant and important to the study is reviewed. The literature review provides a theoretical grounding for the study.

Chapter 4: Research design and methodology

This chapter focuses on the review of the data gathered on the effects of condonation on the promotion of senior phase mathematics learners to the FET phase without academic support. The researcher chose a qualitative research design and exploratory research questions to conduct research on the effects of condonation on mathematics learners.

Chapter 5: Empirical results

Chapter 5 presents an analysis of the empirical data gained from focus group interviews with the 2016 and 2017 cohorts of learners as well as semi-structured interviews with mathematics teachers.

Chapter 6: Findings, recommendations and conclusion The final chapter presents the findings, recommendations and conclusion of the study based on the literature and the use of the social constructivist theory to enhance condoned learner performance in FET mathematics.

1.14 Definition of terms

Automatic promotion: Promoting learners who have completed a given school year to the next grade even though they do not meet the minimum requirements to pass (Brophy 2006:4).

Condonation: The relaxation of promotion requirements, which allows a learner to move to the next grade despite the learner not having achieved the minimum requirements to pass (DBE 2011: viii).

Curriculum and Assessment Policy Statement (CAPS): A single policy document that has replaced all previous curriculum statements (DBE 2011a:1).

Grade repetition (also called "grade retention"): The practice of holding back learners in the same grade for an extra year when they have failed to achieve the promotion requirements (Koppensteiner 2013:2).

Learning support: The provision of assistance to learners who have difficulties in learning, mainly on the advice of the class teacher and with the consent of the parents (Sichombe, Nambira, Tjipueja & Kapenda 2019:15).

Outcomes-based education: An approach to education that was underpinned by Curriculum 2005. It was a learner-centred, process-and-achievement-orientated activity aimed to encourage lifelong learning (DBE 2002:247).

Promotion: The movement of a learner from one grade to the next when that learner meets the minimum required level of achievement per subject in a grade (DBE 2011c: xi).

Retained learner: A learner who did not meet the minimum requirements to pass; therefore, the learner cannot move to the next grade (Kader 2012:113).

Social promotion: Moving a learner to the next grade with his or her peers despite the learner not meeting the minimum requirements to pass (Brophy 2006: ii).

Special condonation dispensation: When a senior phase learner meets all the requirements to be promoted from one grade to the next, except for mathematics where the learner has not attained

40% (level 3) and, therefore, should be retained, the learner may be condoned in mathematics if he or she has achieved a minimum of 20% (Mweli 2016:2).

Chapter 2: Theoretical perspective

2.1 Introduction

The study aligns itself with Vygotsky's social constructivist theory as the theoretical perspective through which the effects of condonation on the promotion of senior phase mathematics learners to the FET phase without being academically supported are investigated. The researcher shares the view of other scholars that senior phase condoned mathematics learners, who lack foundational knowledge, are pushed into the FET phase and struggle with learning (Legotlo, Maaga & Sebego 2002:117; Spaull 2013:6; Statistics South Africa 2015:53). These learners have acquired learning deficit gaps in mathematics that will affect their performance levels in the grades ahead (Reddy & Nair 2016:112).

To assist condoned learners who are now in the FET phase to overcome their learning gaps in knowledge, they need to gain basic knowledge in mathematics. Accordingly, the DBE introduced the SIAS policy (DBE 2014), which specifically addressed the need to provide learners with academic support to overcome their learning difficulties. The social constructivist theory provides a framework for the researcher to conduct an empirical review of the effects of condoning and promoting senior phase mathematics learners to the FET phase without being academically supported.

2.2 Social constructivist theory in teaching and learning

Learning theories inform one how learners' process, internalise and hold on to knowledge they have gained in the teaching and learning process (Amineh & Asl 2015:10). Of the three broad learning theories – behavioural, cognitive and constructivist – the study uses social constructivism, which is attributed to Vygotsky (see Au 1998:299; Liu & Matthews 2005:387). Vygotsky theorised learning in children as a process of constructing knowledge with their lived experiences in their learning environment (Au 1998:300). Pritchard and Woollard (2010:9) and Chu and Chen (2010:66) mention other scholars, such as Kuhn, Bandura, Bruner and Piaget, who also emphasise the importance of the socio-cultural learning environment in assisting condoned learners.

Learning is actively constructed by the participants therein socialising within a particular socio-cultural environment (Doolittle 2014; Pritchard & Woollard 2010). In other words, knowledge is

a social construct and an outcome of social exchanges of language among a group of people with similar characteristics. A cohort of, for example, condoned learners can mediate socially. Doolittle (2014:487) points out that when learners mediate socially, their language is the medium through which they develop knowledge; hence, meaning is constructed. The constructed knowledge consists of theories, concepts, facts and principles, which also change the mindsets of learners (Badie 2016:292). This new knowledge is based on the context and time in which it finds itself, because knowledge construction is influenced by historical, cultural and social factors (Au 1998:301), such as the circumstances of condoned learners.

In the world of social constructivism, the concept of teaching a lesson has now changed to facilitating a lesson (Doolittle 1999:7). In other words, the concept of the teacher instructing the lesson content in its traditional form is no more. It gives the teacher the opportunity to create and facilitate learning so that learners, especially condoned learners, can part take in processing and gaining knowledge. Therefore, learners are not passive receptors of knowledge but are actively interrogating the contents with questions (Liu & Matthews 2005:387). The facilitator is now a motivator, supporter and challenger in the process of condoned learners learning and not seen as a source of information in the traditional sense anymore.

Learners in a classroom also play a pivotal role in the collaborative assimilation of knowledge (Au 1998:311). When learners work in smaller groups, they exchange communication with one another, which may allow them to be more successful in gaining new knowledge (Amineh & Asl 2015:14). Peer tutoring is perceived to be more successful than the teacher leading a lesson because condoned learners have shared life experiences, which they may share among themselves in dialogue (Au 1998:311).

Dialogues and discussions about concepts, problems or case scenarios can be established. The teacher can be supportive and guide the condoned learners' discussion by using appropriate questions, the introduction and clarification of new knowledge or referencing previously gained content (Au 1998:349). More generally, social constructivist learning implies that peer learning is negotiated under the guidance of the teacher.

Learning the subject matter in social constructivism entails learners experiencing the reality in the classroom to build their knowledge events (Doolittle 2014:486). For example, mathematical

problems should be reflective of everyday situations, so that when condoned learners are exposed to such problems in real-life situations, they are capable of managing these because they have built up their knowledge from the exposure they have had in the classroom. Moreover, Karatepe (2012:17) points out that social constructivist learning should include social negotiation and mediation. Such opportunities for condoned learners may develop their social skills and knowledge, thus resulting in a better performance in mathematics.

2.3 Criticism of the social constructivist theory

Vygotsky and Piaget are, in general, accepted as well-known proponents of the social constructivist theory, while antagonists such as Sweller, Kirschner, Clark and Moreno heavily weigh in with criticism on the use thereof (Alanazi 2019:2). Other contemporary proponents of social constructivism are Amineh and Asl (2015), while Liu and Matthews (2005) have contrasting views. Various debates on the use of this learning theory have been conducted in the scholarly world. Therefore, the researcher chose to critique three factors (out of many) that contribute to a social constructivist learning environment, namely the learner as a constructor of knowledge, the teacher as a facilitator and mediator of learning, and time.

2.3.1 The learner as a constructor of knowledge

Proponents of the social constructivist theory suggest that knowledge is constructed by learners being actively involved in the learning process and influenced by their real-life experiences. They argue that learning is a process of collaborative social interaction and negotiation with other knowledgeable persons through smaller group dynamics (Amineh & Asl 2015:11; Bay, Bagceci & Chetin 2012:343; Hyslop-Margison & Strobel 2008:74).

Antagonists may argue that since knowledge is negotiated, mediated and informed by individual learners' own experiences, the outcome of meaning may differ among them (see Liu & Matthews 2005:386). Also, giving different learners a uniform curriculum is not effective because each learner varies in his or her thinking; therefore, having one curriculum for all learners leads to an inefficient learning environment (Alanazi 2019:3).

In social constructivism, learners learn how to learn, so they are given minimal instructions by their teachers, which is likely to result in teachers experiencing difficulty in achieving the learning

outcomes (Alanazi 2019:2). Consequently, learning is not meaningful because of a lack of effective instructions from the teacher. Also, learners may not be able to actively construct the new knowledge, and without effective instruction, they cannot mentally and physically assimilate and internalise knowledge through their smaller group dynamics (Alanazi 2019:2).

2.3.2 The teacher as a facilitator and mediator of learning

The teacher is now seen as a facilitator of the learning content, mediating the learning experience to learners or scaffolding the concepts to learners represented in authentic scenarios (Amineh & Asl 2015:9; Bay *et al*. 2012:344). However, teachers are not fully aware of the various roles and skills attached to them. In other words, teachers, like many other scholars of research, do not fully understand the process of accumulated knowledge and the transition thereof from one person to the next; otherwise, the achievements levels of learners would have improved significantly (Alanazi 2019:1).

Learners' progress in developing knowledge through group dynamics, discussions and contributions is largely dependent on the skills of mediation among them (Palincsar 1998:349). The role of learners as passive receptors has changed to one of essential builders and directors of knowledge while they are involved in problem-solving activities (Charles 2014:31). However, opponents of social constructivism argue that each learner in a group views the world differently; therefore, instructions given on curriculum content may not be effective because of a lack of shared experiences (Alanzi 2016:2). This may affect learners in their group dynamics when constructing knowledge.

2.3.3 Knowledge is based on time

Liu and Matthews (2005:386) note that knowledge is valid based on a specific time, place and social community. In other words, knowledge formed in a social constructivist environment cannot claim to be the absolute truth because learners visualise and grasp concepts differently based on their individual earlier experiences. However, here lies a contradiction; for example, in a mathematics lesson, 1 + 1 = 2. The answer is true in any time or context; therefore, to suggest that knowledge is valid within a specific frame is at odds with the notion that knowledge is constructed and negotiated.

The other possible shortfall of the social constructivist framework involves the availability of time. Teachers require sufficient time to plan and deliver socially collaborative lessons; however, due to the demanding workload of teachers, little time is left to prepare such lessons (Amineh & Asl 2015:12; Kroflič 2019:60). Consequently, it is highly unlikely that teachers will honestly conduct their lessons within the guidelines of social constructivism.

Another aspect of a socially collaborative lesson is project-based learning. Learners in smaller groups build knowledge and skills collectively by spending extensive lengths of time in real-life situations, engaging in questions and answers (Jin, Hwang & Kim 2020:7). Again, this may probably not happen as it has been pre-planned by the teacher because subjects have timelines governed by the annual teaching plan, which is a directive from the DBE.

2.4 Assumptions of the social constructivist approach

In social constructivism, it is highlighted that the construction and mastery of knowledge are based on the understanding of culture and its context (Derry 1999; McMahon, as cited by Amineh & Asl 2015:13). Social constructivism is based on specific beliefs about real-life situations, together with knowledge and learning (Kim 2001:3). It is crucial to comprehend and apply the different frameworks of teaching and learning that are located in the social constructivist perspectives. Kim (2001) affirms that reality, knowledge and learning inform the theory of social constructivism.

Doolittle (2014:489) and Bay *et al.* (2012:34) are social constructivist scholars who believe that reality is constructed through human activities and does not exist beforehand. In other words, reality is created through the social collaboration of learners in a group and not by individuals. Therefore, the real world cannot be discovered but is formulated through group dialogues. Hyslop-Margison and Strobel (2008:74) postulate that knowledge is a socially and culturally constructed product by groups of individuals or learners. They build meaning through their reciprocatory exchanges with one another and with their learning environment. This shows that learners are mentally and physically generating meaning or knowledge as an outcome of collaborative and reciprocal interchanges.

Bay *et al*. (2012:344) regard learning as a socially interactive process. Learning within an individual and group member capacity is an active process. Palincsar (1998:349) also mentions

that meaning is generated through group dynamics involved in social learning activities such as collaborative peer learning sessions in the learning environment.

2.5 Principles of the social constructivist approach

Fosnot (1989:12) argues that learners learn new thoughts from constructing knowledge on their prior knowledge. He postulates that new ideas occur as individuals adapt and change their old ideas, and this involves designing new ideas rather than the mechanical absorption of knowledge. Furthermore, Fosnot (1989:12) reports that meaningful learning occurs by scaffolding new knowledge on the basis of existing knowledge. In other words, condoned learners need to overcome their gaps in knowledge so that the new content may be acquired and possibly improve their performance in FET mathematics.

Learners learn new thoughts from constructing knowledge; similarly, teachers make learners understand that they are co-constructers of meaning within their environment (Amineh & Asl 2015:14; Charles 2014:31). Vygotsky (1978) advocates that learners' knowledge is, at first, fabricated in a social surrounding; thereafter, the new information is personalised. Learners engage in learning activities in their classroom, whereby they are actively involved in shared, peer-tutored groups and reading and writing activities to achieve new knowledge and strategies (Pritchard & Woollard 2010:4). This means that condoned mathematics learners may be able to achieve better results in the FET phase if they interact in small groupwork activities, thereby collaboratively building an understanding of the content matter.

As learners individually adapt and change their old ideas through their experiences, they gain new ideas. As knowledge is constructed, learners have prior knowledge, which undergoes a change informed by their experiences (Amineh & Asl 2015:11). Knowledge construction takes place in the cognitive structures, namely their schemata and heuristics (Palincsar 1998:347). It is generally accepted that these cognitive structures are responsible for problem solving in learners (Kroflič 2019:64). As learners are directly interacting with the mathematical content, they are actively learning and building on their prior knowledge, which may improve their performance in the subject matter.

Learners are responsible for learning, which involves designing new ideas rather than the mechanical absorption of knowledge. In other words, learners are actively engaged, among other

things, in problem-solving tasks, peer interaction through verbal exchange and observation in a social context (Alanazi 2019:1; Palinscar 1998:350; Pritchard & Woollard 2010:63). Condoned learners tend to learn and gain new meaning by establishing their own schemata based on knowledge given from their group work, which may lead to their improved achievement in FET mathematics.

When meaningful learning occurs by scaffolding new knowledge on the basis of existing knowledge, the teacher takes on an active role in building learners' understanding by posing challenging questions and contradictory evidence while encouraging new ideas and thoughts (Oldfather, West, White & Wilmarth 1999:17). The teacher is the more knowledgeable person who mediates learners' knowledge construction. A teacher's mediation results in increases to the condoned learners' knowledge banks and may lead to improvement in their mathematical skills in the grades ahead.

2.6 Social constructivism in the mathematics classroom

2.6.1 Role of the mathematics teacher in the social constructivist environment

A mathematics teacher in a social constructivist classroom recognises that for effective teaching and learning to take place, collaborative learning opportunities for peer learning and teacher-centred lessons are needed (Au 1998:311). The mathematics teacher takes on the role of the facilitator who is responsible for providing a learning environment filled with learning activities indicative of opportunities for teamwork, problem solving and real-life experiences (Ndon 2011:253) and for creating cognitive activities that produce a representation of an abstract perception in reality (Badie 2016:292; Tomei 2009:60).

The reality is that a mathematics teacher needs to be more versatile in the facilitation of mathematics lessons. It essentially means that the mathematics teacher asks questions and supports learners while placing learning at the forefront (Kroflič 2019:60). It is the prerogative of the mathematics teacher to provide guidance in a conducive learning environment for learners to arrive at their own conclusions in the class (Amineh & Asl 2015).

Scaffolding in a mathematics class enhances the knowledge acquired by using support systems or simply the slow building of knowledge and understanding by individual learners (Pritchard &

Woollard 2010:5; Sarker, Chatterjee, Xiao & Amany 2019:39). The outcome of mathematics learning differs for each learner because learning is informed by their own understanding of reality, previous knowledge, understanding and experience (Sarker *et al.* 2019). The mathematics teacher should be able to accommodate the individuals in the learning process and provide different support systems for their individual needs.

Different support systems direct the varying roles that mathematics teachers can assume in scaffolding knowledge for learners (Zurek, Torquati & Acar 2014:29). According to Zurek *et al.* (2014), the mathematics teacher has a crucial role to play in the learners' learning process by scaffolding their cognitive and social development. Mathematics teachers inspire learning and provide a safe classroom for learning while listening to discussions and providing positive feedback (Pritchard & Woollard 2010).

Vygotsky (1978) suggests that the use of scaffolding is the most effective in the so-called zone of proximal development. The teacher's role of providing support to learning should be tweaked to match the knowledge and skills that are just above that which the learners already have and which they can achieve (Zurek *et al.* 2014:28). Vygotsky postulates that cognitive growth and learning in learners is determined by the changes in their zone of proximal development. He describes that a learner's true level of development and level of achievement are reached with the assistance of teachers (Au 1998:300; Pritchard & Woollard 2010:14; Sarker *et al.* 2019:30).

Learners acquire knowledge through learning opportunities created by the facilitator (Au 1998:300). The teacher, as a creator of the learning environment, designs learning activities for learners to discover new knowledge (Liu & Matthews 2005). Vygotsky points out that the teacher uses tools or instruments to help learners gain knowledge. By providing this type of academic support, learners should engage in higher mental processes, which may lead to improved performance levels in FET mathematics and mathematical literacy.

2.6.2 A social constructivist theory lesson plan

Lesson activities in a mathematics classroom ensure that learners are positively engaged (Hyslop-Margison & Strobel 2008). Vygotsky (1978:57) reasons that acquiring knowledge takes place through activities that happen among people within themselves. The interaction of mathematics learners builds on a bank of information on which they base their opinions and feelings about the

topic discussed. Knowledge is anchored into the learner's intellectual space from the intrapersonal process.

Mathematics learners discover new knowledge via social interaction with one another and within their environment (Amineha & Asl 2015:14). The teacher needs to plan and construct a social constructivist classroom through the lesson plan. Lesson plans should create learning opportunities that are life-changing in nature. These plans should cater for activities in which mathematics learners can offer contrasting answers to the problem they may experience in the real world, each with its particular strengths and weaknesses (Bay *et al*. 2012:344). Lessons should also make provisions for inquiry by asking open-ended and thought-provoking questions while encouraging learners in groups to pose questions to their peers (Charles 2014:31).

Lesson plans need to provide opportunities for collaborative learning in smaller groups in the mathematics classroom (Pritchard & Woollard 2010:27). Groupwork activities must be planned well, with clearly stated structures, responsibilities for individual learners, activities and end results. Social constructivist lessons are planned for learners who are perceived as social constructors of knowledge and not dormant receivers of the learning content (Amineh & Asl 2015:11). The mathematics teacher is responsible for guiding the different groups of learners in the classroom and providing them with opportunities to test whether their current knowledge is adequate and to build on it.

All learners build new mathematics knowledge on their existing knowledge (Dagar & Yadav 2016:3). Lesson plans should cater for each learner's prior knowledge and provide learning opportunities for them to construct new knowledge on their previous knowledge. Mathematics teachers may use teaching media to help learners to move from the known (previous knowledge) to the unknown (new knowledge). Teaching media must be integrated into the learning environment, thus providing a tangible aid to building abstract concepts (Amineh & Asl 2015:11). In other words, lesson plans should be flexible to include different learners at their varying learning zones incorporating teaching media for effective growth of knowledge.

2.6.3 How is the social constructivist approach applied in a mathematics classroom?

Mathematics learners are believed to be developing their norms and values matching those of their immediate culture by interacting with the learning environment in which they find themselves (Hwang & Kim 2020; Kroflič 2019). Amineh and Asl (2015) concede that no two learners are the same because their prior knowledge is shaped by their own background and culture. Learners develop their mathematical thinking skills and abilities in collaboration with others more knowledgeable; therefore, the teacher must be cognisant of their background. The learners' background influences the construction of new knowledge and the discoveries they make in mathematics (Amineh & Asl 2015).

The social constructivist classroom influences learners' interests and builds new knowledge through the process of scaffolding instructions (Alanazi 2019:3). Learning is at its best when learners practise solving real-life mathematical problems in the classroom and are required to explain their thoughts and recognise their limitations. Their limitations are reduced when they acquire new knowledge disseminated by the mathematics teacher (Au 1998).

When new knowledge is gained, changes take place in the learners' minds (Badie 2016:292). Flexibility is needed in the mathematics curriculum to meet the interests of its target audience and connect them to the social and natural environment (Kroflič 2019). The mathematics teacher is the driver of the learning situation by asking inquiring questions, placing the learner at the centre of the learning situation and guiding them to their own logical conclusions using interactive communication in the learning environment (Amineh & Asl 2015; Hwang & Kim 2020).

2.7 Social constructivism as a subjective creation of reality

Social constructivists are of the belief that independent people are looking for an understanding of the world in which they live (Creswell & Creswell 2018:48). Mathematics learners develop their viewpoints on their experiences and the phenomena around them. Their stance is based on their perceptions and is not factual; therefore, meaning obtained using a social constructivist approach in a mathematics classroom will gain diverse views and not result in a narrow meaning on an issue or a single possible truth (De Vos *et al.* 2011:311).

Mathematics learners collaboratively working in small groups present an opportunity for the learners to socially construct knowledge (Jones & Pepin 2016:1). Individual learners collectively interact with one another on a mathematics problem while constantly sharing ideas, negotiating and making decisions. Through interaction, learners gain new skills from their peers in a group or an adult who is more competent than they are. A more knowledgeable person helps the less knowledgeable learners move through the zone of proximal development (Dagar & Yadav 2016:4).

Mathematics teaching in a social constructivist classroom entails learner-centred, real-life-like experiences in a collaborative learning environment (Dagar & Yadav 2016:2). Each learner is different; therefore, the solutions obtained from group work will vary. This is an opportune moment in the mathematics classroom for dialogue and discussion while negotiating the right answers, facilitated by the subject teacher. Through this, learners will resolve that despite their solution being correct, there are other solutions to the same mathematics problem.

2.8 Collaborative learning in a mathematics classroom

Collaborative teaching in mathematics is important because social constructivists believe that knowledge is fundamentally a social construct and a negotiable outcome (Hyslop-Margison & Strobel 2008:84). The social constructivist perspective indicates that peer tutoring and a learner-centred approach allow learners to construct new knowledge (Alanazi 2019:5). Therefore, condoned mathematics learners should be placed in smaller groups and facilitated by the subject teacher to improve the learners' acquisition of the content with the assistance of their peers.

Mathematics learners are involved in various social activities, such as class discussions, interactive group work and problem-solving educational experiences in real-life situations, which are when meaningful learning takes place (Amineh & Asl 2015:13; Bay *et al.* 2012:343). Collaborative learning provides situations for the practice of problem-solving and intellectual skills, so that in real-life problems, mathematics learners will have the skills to resolve them (Amineh & Asl 2015:15). This happens under adult guidance or together with more capable peers (Vygotsky 1978:86). In essence, condoned mathematics learners should experience authentic life problems in mathematics under the supervision of the teacher, preparing them for real-life mathematical challenges.

In a group collaboration event in a mathematics classroom, each learner brings his or her own personal experiences, which are on his or her own level of development, and thereafter follows a reciprocation of each other's personal knowledge (Liu & Matthews 2005:392). Learners begin to comprehend mathematics knowledge as a result of collaboration with other people within the offerings and constraints of the social setting, because everyone has a personal contribution to make. Liu and Matthews (2005:393) make the point that individual learners are able to connect with other group members through "collective subjectivity", which is developed historically by active group work. In other words, condoned mathematics learners collectively interacting can learn from one another's prior knowledge and build new concepts and understanding on it.

2.9 Summary

The social constructivism framework provides a foundation for the research to investigate the effects of condoning and promoting senior phase mathematics learners into the FET phase without being academically supported. According to social constructivism, children learn through a process of constructing knowledge with authentic life experiences in the classroom, also referred to as the socio-cultural learning environment (Liu & Matthews 2005:387).

The complex nature of the social constructivist approach was explained by critiquing different scholars, such as Amineh and Asl (2015) and Liu and Matthews (2005), and comparing their viewpoints. The researcher focused on critiquing three factors that contribute to a socio-cultural learning environment in the classroom, namely the learner as a constructor of knowledge, the teacher as a facilitator and mediator of learning, and knowledge being based on time.

This chapter also showed that collaboration in the mathematics classroom, guided by the different roles of the teacher, should contribute to effective learning among learners in group work. The planning of lessons should be adaptable to the different cognitive levels of the learners interacting and learning from one another. Using this as a guide in teaching condoned senior phase learners may lead to improved mathematics performance levels in the FET phase.

Chapter 3: Literature review

3.1 Introduction

This chapter explores various literature sources on the effects of condonation on the promotion of senior phase mathematics learners into the FET phase without their being academically supported. A review of the literature not only highlights the gaps in knowledge but also identifies inconsistencies in the literature (Arshed & Danson 2015:33). The purpose of the literature review is to critique all the resource information related to the topic and then constructively argue that there is a gap in the literature available on the effects of condoning senior phase mathematics learners. Literature from a South African and international context is discussed to better understand the current practices of local schools condoning and promoting learners to the FET phase without an academic support programme.

3.2 The condonation and academic support of learners on an international level

Countries such as Pakistan, Uganda and Cameroon do not allow learners to fail a grade. Schools in these countries use a policy of social promotion whereby a learner moves to the next grade with his or her peers (age cohort) and receive remedial academic assistance, despite the learner not meeting the minimum requirements to pass (Brophy 2006: ii). In Pakistan and Uganda, schools provide academic support to their learners in the form of an intervention programme or remedial instruction with parental involvement so that acceptable levels of performance can be achieved (Brophy 2006:4). However, schools in Cameroon do not provide academic support, and this has had dire consequences for learners' performance levels.

In Pakistan, learners at the primary level are promoted at the end of the academic year without examinations and based on their age, which has severely affected the quality of primary education (Chohan & Qadir 2011:2). The automatic promotion policy allows for the movement of non-achieving learners together with achieving learners to the next grade, while not providing learning support to the non-achievers. Chohan and Qadir's (2011:6) study shows that teachers are forced to promote all learners, irrespective of whether they are prepared for the next grade, while weaker learners need extra time to master the content matter before the new year.

In Uganda, Okurut (2015) examined the effect of automatic promotion on the learning achievement of primary school learners. The researcher determined that automatic promotion should be accompanied by complementary teaching so that the learners could overcome their barriers to learning (Okurut 2015:96). Automatic promotion implemented in itself was not effective in assisting learners to bridge their gaps in knowledge that had been gained in the previous years. The study concluded that automatic promotion accompanied by effective learning interventions was most likely to be an advantage to low-performing learners.

In Cameroon, Tani (2018) conducted an empirical investigation on the effective implementation of the automatic policy in public schools. The study revealed that the automatic promotion policy had been introduced in 2006 to assist learners who did not meet the promotion requirements to be transferred to the next grade (Tani 2018:63). Also, the study found that teachers did not provide any learning support outside the normal school day to learners who had failed to meet the pass requirements. This was a deviation from the automatic promotion policy (Tani 2018:90). The researcher recommended that academic support should be given to learners who were struggling with learning and this might be in the form of remedial teaching or extra teaching outside the normal school day (Tani 2018:91).

3.3 The condonation policy in the South African context

The condonation policy in the South African context can be traced back to the inception of the Curriculum and Assessment Policy Statement (CAPS), which was introduced to schools in South Africa in 2011 by the DBE (2011a:1). The CAPS policy consists of a policy statement for each subject offered in a public school. The *CAPS Grade 7-9 Mathematics* document (DBE 2011a) specifically introduced the content and different types of assessment in mathematics for grade 7 to 9. The *National Protocol for Assessment Grades R-12* (DBE 2011d) specifically states the minimum pass requirements for all subjects, including mathematics.

However, the introduction of CAPS came with many learners not meeting the minimum percentage mark requirement to pass Grade 9 mathematics. This might be attributed to promoting learners from grade to grade without their having mastered the "basic skills and knowledge" (Legotlo *et al.* 2002:117). The situation resulted in these learners struggling with the new learning content in the FET phase because they lacked foundational knowledge.

According to the DBE policy on mark adjustment for the senior phase, learners may not be disadvantaged by the introduction of CAPS in its first year (DBE 2015:1). Therefore, the DBE introduced a mark adjustment policy for the senior phase from 2015 up to 2020 to assist failing learners to be promoted. *National Assessment Circular No. 3* of 2015 was issued by the DBE, declaring that a percentage mark would be added on a sliding scale to failing learners' original percentage mark. Marks were added as follows: 7% in 2015, 6% in 2016, 5% in 2017 and 2% in 2018 (DBE 2015:4). For the years 2019 and 2020, the *National Assessment Circular No. 2* of 2019 stated that a maximum of 2% would also be added on a sliding scale to the learners' original mathematics percentage mark and they would be eligible for condonation in mathematics (DBE 2019). This assisted learners to claim the 40% pass requirement in mathematics and First Additional Language and the 50% pass requirement in Home Language, which enabled progression. Apparently, this was insufficient as learners continued to struggle with good performance and ended up failing grades. For the purpose of this study, the 2016 and 2017 cohorts of learners who were condoned in mathematics and then promoted to the FET phase was under review.

In 2016, the mark adjustment policy was supplemented with the special condonation dispensation policy, which basically meant the lowering of the pass requirement to 20% and 30% to promote struggling learners to the FET phase. Firstly, the condonation dispensation allowed for a percentage mark adjustment of senior phase learners' marks in mathematics and the languages on a sliding scale from 2015 to 2017, and secondly, condonation was applied to mathematics only for the purpose of promotion to Grade 10 (DBE 2016:1).

The guidelines for condoning senior phase learners to the FET phase for the years 2016 and 2017 were applied for learners who met the national promotion requirements for Grade 9 CAPS. To progress to Grade 10, the following requirements must be met:

- Adequate achievement (Level 4: 50%-59%) in one language at Home Language level.
- Moderate achievement (Level 3: 40%-49%) in the second required official language at First Additional Language level.
- Moderate achievement (Level 3) in mathematics.
- Moderate achievement (Level 3) in any three of the other required subjects.

- At least an elementary achievement (Level 2: 30%-39%) in any two of the other required subjects.

Grades 9 learners were promoted to Grade 10 if they complied with the promotion requirements in eight of the subjects as contemplated in the points above, provided the school-based assessment component of the ninth subject had been completed. The final mark consisted of 40% from the school-based assessment and 60% of the examination mark.

Below is a summary of the *National Circular No. 3* of 2015 and National Circular No. 2 of 2019. It illustrates the guidelines on the adjustment to learners' percentage mark obtained in the final examination from 2015 to 2018. The DBE (2019) further stated that for 2019 and 2020, an adjustment of up to 2% in mathematics or any one other subject might be done for condonation. The years 2016 and 2017 have been highlighted because these are two years under review in this study.

Table 3.1: Guidelines on learners' mark adjustment from 2015 to 2018

	***National Circular No. 3* of 2015**				***National Circular No. 2* of 2019**
Year	**2015**	**2016**	**2017**	**2018**	**2019 and 2020**
Maximum % mark adjustment	7% in three subjects	6% in three subjects	5% in three subjects	2% in mathematics or any one other subject	2% in mathematics or any one other subject

The guidelines for mark adjustment were as follows:

- Mark adjustments will only be applied in a maximum of three subjects per learner.
- The adjustment will be applied to learners who have obtained a mark that is within range of the pass requirement in a subject.
- Mark adjustments must be prioritised in the fundamental subjects, namely Home Language, First Additional Language and mathematics.

- Mark adjustment must only be carried out when it leads to a learner satisfying the overall promotion requirements as set out in the CAPS.

The table below is an example of how the guidelines for mark adjustments were established for the 2016 cohort of learners, where up to 6% was added to a learner's final mark in the fundamental subjects. In this example, this learner enrolled for mathematical literacy in Grade 10 in 2017 because the mark had been adjusted to 20% and therefore was condoned in mathematics.

Table 3.2: Example of mark adjustment in 2016

Subject	Learner's final % mark	Pass % mark requirement	Adjustment of % mark
Home Language	44	50	6
First Additional Language	35	40	5
Mathematics	14	20	6

The table below is an example of how the guidelines for mark adjustments were established for the 2017 cohort of learners, where up to 5% was added to a learner's final mark in the fundamental subjects. In this example, the learner enrolled for mathematics in Grade 10 in 2018 because the mark adjustment allowed him or her to achieve 30% and therefore was condoned in mathematics.

Table 3.3: Example of mark adjustment in 2017

Subject	Learner's final % mark	Pass % mark requirement	Adjustment of % mark
Home Language	45	50	5
First Additional Language	36	40	4
Mathematics	25	30	5

The response of the DBE to the introduction of its double-assistance strategy was not to disadvantage any senior phase learner with the introduction of the National Senior Certificate (NSC) Grade R to 12 curriculum as well, as it did not change the progression requirements as set out in the national protocols for promotion requirements (DBE 2015:1). Contrary to the statement of the DBE, the pass requirements were, in fact, lowered to 20% and 30%, thereby granting learners condonation and entry into the FET phase.

3.4 Condoned learners' performance levels in mathematics in the FET phase

Condoned learners' performance levels in mathematics and mathematical literacy in the FET phase are very poor. According to Reddy and Nair (2015), the high failure rate in Grade 10 is the result of condoning underperforming learners in the senior phase and then promoting them. The Council for Quality Assurance in General and Further Education and Training (Umalusi 2015) mentions that the repetition rates is the highest in Grade 10, while as much as 40% of the learners drop out of school in Grade 11 before entering Grade 12. The completion rate of FET learners reached the 50% level by 2015 (Umalusi 2015:23). Moreover, many of these learners eventually dropped out of school because they could not pass mathematics or mathematical literacy in the FET phase.

By the time learners reach Grade 9, their level of underperformance in mathematics has increased. Letshwene (2019:42) points out that the pass rate of 30% means that learners did not master the subject content "as it denotes passing only three questions out of ten". This has led to condoned learners struggling to achieve good performance levels in the FET phase. Condoned learners are moved through the schooling system without achieving and consequently lack the foundational knowledge that they should have mastered in the previous grades (Reddy & Nair 2015:112; Statistics South Africa 2015:53).

To illustrate the above information, Table 3.4 below contains the results of the Amajuba district from the year 2016 to 2019. The table tracks the performance of the 2016 and 2017 cohorts of learners who were condoned in Grade 9 mathematics and then promoted to the FET phase.

Table 3.4: 2016 and 2017 cohorts: Results in FET mathematics and mathematical literacy in Amajuba district 2016 to 2019 (Amajuba District 2020)

Year	Cohort	Grade 9 Enrolled maths	Number Pass Maths	Grade 10 Enrolled learners	Grade 10 Enrolled Maths	Grade 10 Enrolled Maths Lit	Pass perc Maths	Pass perc Maths Lit	Grade 11 Enrolled learners	Grade 11 Enrolled Maths	Grade 11 Enrolled Maths lit	Pass perc. Maths	Pass perc. Maths lit.	Grade 12 Enrolled learners	Grade 12 Enrolled Maths Lit	Grade 12 Enrolled Maths	Pass perc. Maths lit.	Pass Per. Maths
2016	2016	12382	9782															
2017	2017	9120	8755	13565	4698	8857	27	78										
2018				8755	4223	4523	31	80	12519	4318	8201	37	81.4					
2019									6698	3526	3172	38	83	9219	6260	2959	84.5	57.9

At first glance, the performance levels in the Phumelela circuit for the 2016 and 2017 cohorts of Grade 9 condoned mathematics learners may show good achievement gains into the FET phase; however, it may not necessarily be true when the drop-out rates are considered (Umalusi 2015). Looking at the *Amajuba District Report* (DBE 2020) for the Phumelela circuit, the 2016 cohort of Grade 9 learners achieved a low 27% in mathematics and an impressive 78% in mathematical literacy in Grade 10, while in Grade 11, an improvement of 37% and 81,4% respectively was recorded. In Grade 12, a massive jump in percentage gains to 57% in mathematics and 84,5% in mathematical literacy was recorded. In the same period, the 2016 cohort also recorded a decline in enrolments from 12 382 learners to 9 219, with the majority being enrolled for mathematical literacy over mathematics.

The 2017 cohort of Grade 9 learners showed a similar trend in performance in mathematics and mathematical literacy compared to the 2016 cohort. The levels achieved began with a low 31% in mathematics and an outstanding 80% in mathematical literacy in Grade 10, while in Grade 11, an improvement of 38% and 83% respectively was recorded. In the same period, the 2016 cohort also recorded a decline in enrolments from 9 120 learners to 6 698, with the majority also being enrolled for mathematical literacy over mathematics.

A higher enrolment for mathematical literacy than mathematics was a noticeable trend (Umalusi 2015:3). This was probably due to condoned learners not having basic knowledge in mathematics and then struggling with the subject content in the FET phase, resulting in their changing to mathematical literacy. Umalusi (2015:91) declares that learners who struggle with learning prefer mathematical literacy to mathematics because they fail mathematics.

The following question arose: Did the condoned learners achieve good results despite their having acquired gaps in knowledge and not being academically supported into the FET phase? Equal Education (2019) reported that the NSC 2019 results were deceiving because up to 50% of the learners had dropped out of school before they reached Grade 12.

Similarly, the Grade 12 learners' mathematics pass rate for Phumelela circuit of 57,9% and 84,5% respectively was not calculated out of the total number of learners who had enrolled for Grade 1. Therefore, the NSC 2019 results were very poor because condoned learners had failed and dropped out of school before reaching Grade 12 (DBE 2017:151).

3.5 Learning deficits in the knowledge of condoned senior phase mathematics learners

Condoned senior phase learners in mathematics have acquired learning gaps in knowledge, which contribute to their underperformance in the FET phase and right up to tertiary level (Reddy & Nair 2015:108). Reddy and Nair (2015:108) are also of the view that learners lack the ability to understand basic mathematical operations and do not perform well when they have been assisted to reach the FET phase. Umalusi (2015) has also found that learners progressing to the FET phase with accumulated deficits in content knowledge and demonstration is the reason for poor performance in this phase. These learning difficulties hinder learners from acquiring basic literacy skills and result in low achievement levels below their abilities (Mavuso 2014:456).

Principals of some high schools deliberately hold back underperforming learners from reaching Grade 12, also known as "gatekeeping" (Umalusi 2015:23), as they do not want bad publicity over poor Grade 12 pass rates. Condoned learners may have been worthy of passing into the FET phase; however, they are progressed and, therefore, may be responsible for the poor pass rate in Grade 12 (Stott *et al.* 2015:91). As condoned learners progress into the FET phase, their cumulative learning deficits gaps have grown over time. This has led to about 50% of the enrolled learners in the cohorts under study failing and dropping out of school before completing Grade 12 (DBE 2020:14; Grossen, Grobler & Lacante 2017:7; Reddy & Nair 2015:116).

Many of these drop-outs then sought alternative opportunities outside the walls of a classroom to complete their Grade 12. The DBE (2020) mentions that the multiple examination opportunity was one such opportunity that started in 2015. In 2019, the multiple examination opportunity recorded 170 963 learners who had completed their NSC on a part-time basis. It was these smaller numbers of learners that the year-end results were based on, which gave a false picture that learners had performed well whereas many did not reach Grade 12. Moreover, those who struggled to reach Grade 12 were often performing poorly in the subject content and, therefore, enrolled for mathematical literacy in lieu of mathematics because their chances of passing mathematics were slim (Umalusi 2015:91).

3.6 Academic support provided to condoned mathematics learners in the FET phase

It has already been established that condoned learners lack foundational knowledge and, therefore, perform poorly in mathematics. Mathematics is hierarchal; so, if basic knowledge is lacking,

condoned learners may carry these gaps in knowledge, along with their poor performance, throughout their schooling (DBE 2010:12). To bridge these gaps in knowledge, underperforming condoned learners should receive a support programme in the new year (DBE 2011b:9).

The academic support programme should contain structured interventions to assist condoned learners to overcome their gaps in mathematical knowledge within specified time frames (DBE 2010:x). These learners require academic support in the new grade to overcome their learning difficulties. Such academic support may result in an improvement in the learners' performance levels in mathematics. Otherwise, the learners will continue with poor performance in the subject content if they are not provided with academic support.

The DBE (2020) states that learning support and academic support have the same meaning. Learning support should be given to learners who experience difficulties in the learning of the subject matter (Mavuso 2014:457). Mavuso (2014) discusses four strategies used by subject teachers to provide learning support to learners experiencing learning difficulties in mainstream education, namely providing extra homework and reteaching, differentiation of the subject, assessment of learners and peer support.

The first strategy mentioned by Mavuso (2014) is the responsibility of the subject teacher to assist learners to overcome their learning difficulties by reteaching and giving them extra work. Other academic support strategies can be used to complement the support already given to struggling learners. The second learning support strategy is differentiation of the learning content, whereby subject teachers can use different teaching methods to help learners cope with their learning difficulties. The third strategy is the assessment of learners to gain insight into their levels of understanding the content and recognise learning challenges to accommodate them in the classroom teaching and learning. The fourth strategy refers to peer support, which involves struggling learners being provided with individual tutoring.

The learning support strategies suggested by Mavuso (2014) are similar to strategies advocated by the DBE (2014). In particular, each learner with learning difficulties should be assisted through a specifically designed and implemented individual support plan (ISP) (DBE 2003:5, 2014:56). Furthermore, in providing guidelines for inclusive teaching and learning, the *White Paper 6* (DBE 2001) describes an ISP as support strategies provided to learners with difficulties in learning and

development. These strategies include an individual learning programme, a work schedule or year plan, the adaptation of lesson plans and the learning environment, support interventions from peers and assistive devices (DBE 2010:21). The subject teacher can use these strategies to specifically assist condoned mathematics learners to improve their performance in the FET phase.

The subject teacher should not function in isolation when providing learning support to learners. Every school should have a school-based support team that acts within the SIAS policy (DBE 2014). The SIAS policy specifically addresses the need to provide support to learners to overcome their learning difficulties. The support varies from curriculum differentiation and assessment modification to providing specialist support material to learners and teachers (DBE 2014:x). The SIAS policy elaborates further on the uses of peer support at the senior and FET levels (DBE 2014:30). Condoned learners receiving support from their peers is recognised as an integral component in a structured support programme offered by the school-based support team.

3.7 Defining an academic support programme and the contribution it makes to learners' performance level in mathematics

Academic learner support programmes comprise additional teaching material, holiday classes and after-school programmes, and differentiated teaching strategies to address the specific performance levels of learners (DBE 2020:20). Reddy and Nair (2015:4) refer to learning support consisting of additional remediation, curriculum instruction, the academic teaching of learners in groups and other related psychological medical and social support services to prevent learning difficulties in learners. Mavuso (2014:455) broadly defines learning support or academic support as a collective action to support learners with the use of intervention programmes, either by curriculum differentiation and adaptation, or referring learners to other stakeholders for support.

Accordingly, the researcher defines academic support programmes or learning support strategies as including additional teaching material, the remediation of learning in smaller groups, differentiated strategies of teaching, extra classes during the holidays, after-school programmes and academic support provided by other related social structures.

Additional teaching material provides expanded opportunities for struggling learners to work through supplementary mathematical sums like those they have struggled with to strengthen their involvement and inclusion in the lesson (DBE 2014:1). Remediation can take place when learners

did not learn the subject content and require reteaching (Oktavianty *et al.* 2018:4). Remediation should consist of educational interventions strategies focused on learners who did not master the subject content in the previous grades. Learners with similar learning difficulties need to be retaught basic knowledge in small groups (Schwartz 2012:8). Remediation after school hours may bridge learning gaps acquired by learners in their previous grades (Schwartz 2012:22).

Differentiated strategies of teaching refer to the change, modification or adaptation of teaching and learning methodologies as well as assessment strategies to improve learners' performance abilities in the classroom (DBE 2014: viii). Extra classes may be hosted by the subject teacher after school hours or during the school holidays.

Lastly, academic support may be provided to struggling learners by their parents, peers and teachers. Learners' social structures also refer to services received from the Departments of Social Development, Health and the Public Service Administration that should assist learners with social problems that may affect their achievement in school (DBE 2001:34). An academic support programme should consist of different strategies schools may contribute to improving the academic performance of learners who are at peril of diminished academic achievement (Peterson, O'Connor & Strawhun 2014:2). Included in this cohort of learners are condoned mathematics learners who achieved a low percentage mark of 20% and 30% in Grade 9 and were then promoted to Grade 10.

3.8 Individual support plan for condoned learners

Learners condoned in mathematics struggle with grasping the new content because they did not master the subject matter in the previous grade and, consequently, perform poorly in the FET phase (Lumadi 2014:786). Therefore, the subject teacher should design an ISP for every learner who has been condoned because every learner would have experienced different learning challenges.

The function of the ISP is to provide learning support to condoned learners to help improve their academic performance in mathematics. This involves the use of a variety of complementary learning support strategies to intervene with learners who are struggling with poor performance in the subject. The ISP should be developed in collaboration with the parents and the school-based support team (DBE 2014: ix). The objective of the ISP is to supplement the learners' opportunities to acquire the subject matter they had lost out on. This educational support is additional to the

classroom teaching and learning and can be in the form of intervention strategies such as learning programmes, services and resources (DBE 2014:10).

Mavuso (2014:457) claims that learning support should be given to learners who experience difficulties in learning the subject matter; this forms part of the ISP. According to the DBE (2010:21), learning support given by the mathematics teachers is "critical in the learning and development of a learner who experiences learning difficulties". The provision of academic support to learners will help to improve underperforming learners' scholastic achievement (Peterson *et al*. 2014:2).

Hence, the quality of the ISP is critical to providing academic support to condoned learners who struggle with good performance in the FET phase. The following complementary learning support strategies may be used to assist condoned mathematics learners to improve their performance levels as they progress to the FET phase: differentiated learning, remedial teaching on the subject content, peer tutoring and parental support.

3.8.1 Differentiated learning

To understand the phenomenon of learning support, the researcher sought to look at differentiated learning or differentiated instruction in an inclusive classroom, which is helpful for any teacher (Lawrence-Brown 2004:37). Differentiated learning allows the teacher to create different levels of expectations for different learners who are performing at various academic levels in the classroom so that all the learners are included in the teaching and learning. The teacher should use a variety of methods and support to gain success in each learner with differentiated instructions within the curriculum (Waldron & McLeskeyet 2001:175).

Differentiation should be important for learners learning mathematics because in a classroom, learners vary in their readiness, interests and learning preferences. Learners will not be at the same level in their knowledge and understanding of mathematical concepts and in their use of mathematical skills, such as mental mathematics and estimation (Fritz-Stratmann, Ehlert & Klusener 2014:54). Moreover, learners differ in their application of solving problems in mathematics. In other words, they differ in their reasoning skills, connecting mathematics to real life and representing mathematical ideas and relationships.

The curriculum may be differentiated to cater for each learner's individual needs to prevent underperforming learners from failing mathematics in the FET phase. This should assist learners to overcome their learning difficulties in learning mathematics and reach the necessary level of knowledge, skills and competencies (DBE 2011:4-5).

3.8.2 Remedial teaching on the subject content

Learners who were condoned in mathematics in Grade 9 and advanced to Grade 10 without achieving the minimum requirement to pass, find learning the new subject matter challenging (Letshwene 2019:35). Condoned learners should receive remedial teaching on the mathematical content they found difficult to grasp in the senior phase, so that they would be able to assimilate the new FET content.

Remediation is defined as "any form of additional training, supervision, or assistance above that is required" (Riebschleger & Haftel 2013:63). Remedial education can be described as courses in reading, writing or mathematics for learners who have a deficiency in performing the necessary academic skills (Bailey, Jenkins & Leinbach 2005:5). Consequently, the researcher defines remedial teaching as the reteaching of content (condoned) learners find difficult to master.

The SIAS policy (DBE 2014:12) focuses on remedial teaching to assist learners to increase their performance levels in the subject matter. Subject teachers should also be remedial teachers to provide the necessary academic support to condoned learners with learning difficulties, which may result in an improvement of the learners' performance levels in school (DBE 2001:41).

3.8.3 Peer tutoring

A school-based support team should consist of learner representatives at the senior, further education or higher education levels (DBE 2014:30). The support provided by learners' peers may vary from psychological to academic or social support. Peer tutoring should be an academic approach that entails learners providing assistance to one another to learn content through the repetition of key concepts (Bowman-Perrott, Davis, Vannest & Williams 2013:39). The use of peer support intervention may be an approach to supporting learners in a socially participative environment to provide tutoring on learning difficulties learners experience (Mavuso 2014:459).

Some schools have adopted a "buddy system" as a form of peer support for learners who experience challenges to learning with substantial academic benefits. Bowman-Perrott *et al*. (2013) reveal that peer tutoring is effective for both elementary and secondary learners. The strategies involved in successful peer tutoring that require the repetition of key concepts in the subject content and opportunities for the learners to respond have resulted in an improvement in learners' levels of performance (Bowman-Perrott *et al*. 2013:50).

3.8.4 Parental support

Letshwene (2019) believes the most effective strategy to improve learners' mathematics performance level is to engage the parents in the learning process of their child. The parent is one of several important stakeholders in the implementation of a support programme. Within the environment of the school-based support team, parents should be in communication with the subject teacher on decisions needed to be made about the type of academic support programme offered to their children (DBE 2014:34).

Parents should play an integral role in the early recognition of learning difficulties experienced by condoned learners, and once communicated to the subject teachers, it can lead to finding the "exact nature of the barriers that a learner experience" (DBE 2014:35). Parental involvement will be beneficial to improving the performance level of learners (Letshwene 2019:42; Pule 2019:44). Hence, it should be incumbent upon the parents of condoned learners to inaugurate contact with subject teachers regarding their children's progress and where supplementary support is needed. This will allow parents to provide academic support to learners struggling with the subject content at home, while also being informed by the subject teachers on their children's progress in terms of the academic support programme they are following. However, parents who are ill-informed of the supporting role they need to play in the academic support programme may increase their children's learning difficulties in the subject content. For this not to happen, the parents and subject teacher should be in constant communication with each other on the activities of the support programme and the successes and failures thereof (DBE 2010:14).

Parents can have a positive effect on the performance levels of learners in an academic support programme. According to the *White Paper 6* (DBE 2001:34), the parent component of providing support to learners with barriers to learning, in an inclusive education system, is very important.

Parents should be more robustly involved in their children's academics (DBE 2001:50). Therefore, it is of paramount importance that parents and subject teachers should forge a two-way communication relationship so that parents can be correctly informed of the learning difficulties their children are experiencing. Parents can also play a supportive role at home because learners may continue to participate in the academic support programme long after having left the institution.

3.9 Possible challenges of condoned learners in the FET phase

Spaull (2013) mentions that learners in the senior phase are promoted without grade-appropriate competencies, which results in their acquiring shortfalls in their mathematics learning content. Subsequently, their poor performance is clearly noticeable over a specific period, especially from Grade 10 to Grade 12. Unfortunately, without remedying their poor performance, dire consequences may be experienced by condoned learners, especially when they enter the FET phase.

The DBE (2015) points out that due to learners being condoned, there is a high drop-out rate, especially from Grade 10 to Grade 12, due to learners failing because of their incompetence in the subject matter. This may also be attributed to the high rate of passing learners who do not meet the minimum pass requirements to the senior phase, in other words, condoning learners. Moreover, in 2019, the DBE reported that the drop-out rate was almost half of the number of learners sitting for the NSC in 2018. There is no condonation in Grade 10, and therefore, many learners underperform and then fail the grade (Spaull 2013:25). The condonation of learners also leads to serious behavioural problems in school because underperforming learners know they will be promoted to the higher grades despite their underperformance due to the promotion policies favouring them (Kalenga & Fourie 2011:34).

There is a dire need to overcome the effects of condonation on senior phase mathematics learners who have been promoted to the FET phase. Mahlo (2013) insists that should learners with learning difficulties receive learning support, it would benefit them in the classroom. This may likely result in an improvement in the learners' mathematics performance and should translate into better NSC results. It may also result in reducing the number of learners failing mathematics, leading, in turn, to a reduced number of learners dropping out of school before they reach Grade 12. Moreover,

learners may leave school having more knowledge in mathematics, which should better equip them to study mathematical courses at the tertiary level. An improvement in the quality of mathematics performance would also allow South Africa as a country to compete globally with other countries. Therefore, there is a need to explore ways to overcome the effects of condonation on senior phase mathematics learners who were not academically supported.

3.10 Perceptions of teachers on the condonation of learners in mathematics

Many teachers in education are of the view that condoning learners contributes to a high failure rate in the FET phase. Legotlo *et al.* (2002) conducted research on the perceptions of stakeholders on the causes of poor performance in Grade 12 in a South African context. The researchers identified several factors teachers perceived as affecting Grade 12 performance, one of which was the automatic promotion of learners (Legotlo *et al.* 2002:117). In a similar study that was conducted with Grade 12 mathematics teachers and learners in the Gauteng East district, the findings revealed that 69% of the respondents agreed that condoned learners contributed to low pass rates in mathematics at Grade 12 level in public high schools (Lumadi 2014:785).

The various teachers' unions also share different viewpoints on the condonation of learners in mathematics. Seemingly, there is a general consensus among teachers' unions that condoning learners is a step in the right direction by the DBE. Leann Roos, the spokesperson of the South Africa Teachers' Union, acknowledges the higher failure rate in Grade 9 mathematics learners and that, therefore, they need to be condoned (*IOL* 2016). Chris Klopper, also of the South Africa Teachers' Union, has expressed his view that learners should not repeat the grade if they only failed mathematics (*Sowetan* 2016). According to Basil Manuel of the National Professional Teachers' Organisation of South Africa, the organisation agrees that learners should be condoned (*Sowetan* 2016). He adds that there is a need to investigate the causes of the high failure rate in mathematics (*Sowetan* 2016). The South African Teachers Union sees condoning learners in mathematics as a short-term solution because the problems with mathematics education are systemic (*Sowetan* 2016). These varying opinions on condonation expressed by the DBE's social partners in education do not change reality as it stands: condoned learners experience difficulty in learning; therefore, assistance in learning is needed.

3.11 Summary

In this chapter, literature on the effects of condoning senior phase mathematics learners and promoting them to the FET phase without their having been academically supported was reviewed. Condonation and the challenges associated with it were discussed on an international level as well as in the South African context. Furthermore, literature was deliberated on the gaps in knowledge that senior phase learners gain after having been condoned in mathematics and promoted to the FET phase. It has become clear that there is a high failure rate in Grade 10, accompanied by poorly behaved learners in the mathematics classroom and high levels of dropping out from school before reaching Grade 12.

Moreover, the study considered four support strategies that mathematics teachers could implement to assist learners to overcome their deficits in knowledge, namely differentiated teaching, remedial work, peer tutoring and parental support. Implementing these strategies may result in an improvement in condoned learners' performance in FET mathematics.

The next chapter presents the research design and how the researcher undertook the data collection process. The data collection tools and the ethical considerations of the study will also be discussed.

Chapter 4: Research design and methodology

4.1 Introduction

The empirical research reviewed the effects of condonation on the promotion of senior phase mathematics learners to the FET phase without academic support. This review guided the researcher to choose a qualitative research design. Exploratory research questions were used to conduct research on the effects of condonation on mathematics learners.

4.2 Research approach

The researcher followed a qualitative approach in the research. A qualitative study investigates a phenomenon that affects a group of people or individuals to reach an understanding of how this phenomenon, whether a social or a human problem, affects them (Creswell & Creswell 2018:32). Among the many characteristics of a qualitative study, the benefits of such a study are as follows (De Vos, Strydom, Fouche & Delport 2011:65):

- A qualitative approach allows the researcher to collect data in the field at the site where the participants are located and experiencing the issue or problem under study.
- Multiple forms of data collection methods can be used instead of relying on a single source.
- Qualitative researchers are the key instrument for collecting data themselves by studying documents, observing behaviour and interviewing participants.

Open-ended questions were posed to the participants to understand their experiences of and beliefs on the effects of condoning senior phase mathematics learners (see Creswell & Creswell 2018:43).

A qualitative research approach also has shortfalls, such as the researcher bringing his or her own personal value to the study and making interpretations of the data influenced by his or her personal experiences (Creswell & Creswell 2018:64). Another shortfall is that the researcher brings to the study his or her own past encounters with the phenomenon under study, in this case, the condonation of learners, which may give specific direction to the development of the study. This may lead to bias in interpreting the data gathered from the participants and obscuring the findings of the study (Creswell & Creswell 2018:314).

In order to avoid bias, researchers should self-reflect on how their experiences would influence the interpretations of the data in the data analysis (Creswell 2014:235). To overcome the researcher's

influence on the study, he focused on the participants making sense of the effects of condonation on the promotion of senior phase mathematics learners to the FET phase and disregarded any past experiences with condoned learners.

4.3 Research design

The investigation used a case study as a research design. Creswell (2016:81) defines a case study as an empirical inquiry about a contemporary phenomenon, bound by a time and a place. An explorative case study design allows the researcher to conduct an in-depth study and focus on a single phenomenon and make meaning out of it (Creswell 2016:55). The single phenomenon under study is the effects of condonation in mathematics on senior phase learners.

The exploratory case study was important to the investigation because it enabled the researcher to work closely together with learners who had been condoned in mathematics and the subject teachers who taught them. This allowed the researcher and the participants to share their experiences on condoning learners in mathematics in the senior phase. Therefore, the researcher tried to understand the participants' experiences in learning mathematics in Grade 10, after being condoned on their Grade 9 subject content and then promoted to the FET phase.

The use of an exploratory case study as a research design has advantages, because it allows the researcher to be immersed in researching a small group of learners (De Vos *et al*. 2011:321). Therefore, the researcher was able to gain insight into the effects of condonation on Grade 9 mathematics learners who had been promoted without receiving any academic support. The research design enabled the researcher to conduct in-depth research with focus group interviews with learners and open-ended individual interviews with teachers within a specific time and space.

Conducting an exploratory case study allowed the researcher to understand learners' and teachers' experiences of condoning senior phase mathematics learners and the effects thereof in a high school. The data were retrieved by posing questions relevant to the participants' experiences and perceptions of the condonation of mathematic learners in Grade 9. The objective of the study was to identify the events that learners had had to undergo as a result of being condoned in mathematics and then promoted and how an academic support programme would affect their performance in Grade 10 and further.

For an empirical investigation to be efficacious, the researcher must exercise pliability and open-mindedness in the search of data and cannot analyse the data from pre-existing theories. Exploratory case studies are fundamentally inductive in nature (Creswell & Creswell 2018:355). Hence, the researcher was able to use the data from the participants and establish patterns or themes on the effects of condonation on learners. To successfully do this, the data gained from the interviews were analysed using thematic data analysis, that is, codes were generated based on the data from the research questions of the empirical inquiry (see Braun & Clarke 2006:79).

4.4 Methodology

"Methodology" can be defined as a structured procedure used by a researcher to seek a solution to a research problem by collecting data using different data collection techniques and, thereafter, elucidating the data collected to provide an interpretation and reach a conclusion and recommendations of the study (Murthy & Bhojanna 2009:32). The methodology of a research study is basically the process that is followed by the researcher to ensure that the information gained is valid and reliable.

4.4.1 Sampling

The researcher used a purposive sampling technique to identify all of the condoned mathematics learners in the 2016 and 2017 cohorts respectively. These learners were similar in age and culture and shared similar experiences of being condoned in mathematics and then promoted. To identify the learners in these cohorts, the researcher used a homogeneous purposive sampling technique. This form of sampling focuses on participants who are similar in age, culture, job or life experience (Etikan 2016:3)

To identify condoned Grade 9 learners for the two focus groups, the researcher used a single criterion for the selection of learners and applied it to the year-end schedules for 2016 and 2017. The single criterion was that learners did not meet the minimum compulsory pass percentage of 40% in mathematics and were advanced to Grade 10 based on 20% and 30% respectively. Thereafter, the researcher had to track these condoned learners in order to identify the grade in which they were in 2019. To do this, the researcher used the year-end schedules for 2016, 2017 and 2018 to track their grade for 2019. The 2016 cohort was supposed to be in Grade 12 but was

actually in Grade 11. The 2017 cohort was supposed to be in Grade 11, but was actually in Grade 10. This showed that each cohort had repeated a grade at least once from 2016 to 2018.

From the 2016 cohort, seven condoned learners were identified, of which only five were still in school in 2019. From the 2017 cohort, 17 condoned learners were identified, of which only five learners were still in school in 2019. The researcher could not account for the absence of the two learners from the 2016 cohort and the 12 learners from the 2017 cohort. The only logical explanation the condoned learners offered was that their peers had dropped out of school in Grade 10 because of failing. By default, the remaining five learners of each cohort formed the two focus groups of condoned learners. Hence, the researcher chose to use five condoned learners in each focus group to represent each cohort. Therefore, the target population under study from the sample school was learners who had been condoned in Grade 9 mathematics and then promoted to Grade 10 for the years 2016 and 2017 respectively. The population consisted of learners who had been condoned in mathematics and promoted to the FET phase, as well as two teachers who had experience of condoning senior phase mathematics learners to the FET phase and teaching them.

The researcher sought to interview the mathematics teachers and derive meaning from their responses on the phenomenon under review (see Creswell 2016:55). Therefore, he purposively selected two mathematics teachers who taught condoned learners and were at the time teaching in the FET phase up to Grade 12. Both teachers were rich in experience, attitude, knowledge and skills because of their experience in condoning learners and teaching them up to Grade 12.

However, the limitation of purposive sampling does not allow the findings of the study to be used to reflect the experiences of all other condoned learners in the district; therefore, no generalisation is made by the researcher. The benefit of using this method allowed the researcher to purposively select the condoned learners for each cohort based on a single predetermined criterion, which was learners who had failed Grade 9 mathematics in 2016 and 2017 and, therefore, underwent the special condonation dispensation (see Creswell 2016:85).

4.4.2 Site selection

The research site is the location where the researcher conducts research (Creswell 2016:36). The sample school of this study is situated in Newcastle, in the Amajuba district in the province of KwaZulu-Natal. The sample school is a secondary school.

The school is well resourced with classrooms, specialist rooms, a hall, undercover parking for all the teachers, a fully resourced kitchen for its feeding scheme, CCTV cameras and an administration centre equipped with a dedicated administration staff performing different office duties. The sport fields are well maintained, and there are designated gardens for learners to use during lunch break. The computer laboratory is fully equipped, and learners are allowed to conduct online research for their school-based assessments. Mathematics and mathematical literacy are compulsory subjects for all grades.

A combined high school has Grade 1 to Grade 12 in the school. Consequently, it was easy to track the condoned learners' performance in the FET phase because all their records were housed in one office. The researcher was of the opinion that the selected school would have applied the condonation dispensation consistently and fairly in the years 2016 and 2017.

4.4.3 Participant selection

At the selected high school, the participants in the research consisted of five condoned senior phase mathematics learners for each of the 2016 and 2017 cohorts and two mathematics teachers. These teachers were selected to participate because both of them were rich in experience, attitude, knowledge and skills because of their experience in condoning learners and teaching them up to Grade 12 level.

The use of focus group interviews for condoned learners and semi-structured interviews for the teachers was based on the belief that the participants would provide a range of responses on their experiences and feelings with regard to the condonation of senior phase mathematics learners and the effects thereof in the FET phase (see Creswell 2016:95). The researcher postulated that both the teachers and the condoned learners were suited to provide clarity on any matters related to the effects of condonation on the promotion of senior phase mathematics learners to the FET phase.

4.5 Data collection strategies

A summary of the strategies that were used in the data collection process of the study is presented below. The researcher used semi-structured questions to interview the focus groups and teachers.

4.5.1 Semi-structured questions

Creswell (2016) notes that the use of semi-structured questions is to obtain the experiences and opinions of participants on a particular phenomenon they experienced. The present study sought to investigate the experiences and thoughts of teachers and learners on the condonation of senior phase mathematics learners and promoting them to the FET phase without academic support.

The objective of any research is dependent as much as possible on the participants' feedback on the phenomenon they experienced. In qualitative research, open-ended questions are preferred to elicit the views of the participants. The questions posed need to be extensive so that the participants can construct meaning from their discussions (Creswell & Creswell 2018:37). During the answering of the questions, the researcher is able to listen intently to the participants actively constructing means through dialogue with the world they are interpreting.

In a qualitative case study, open-ended questions are usually exploratory. In other words, there is very little information that has been documented on the phenomenon under review (Creswell & Creswell 2018:61). Therefore, the questions posed to the participants sought to explore their experiences on being condoned in mathematics and the effects thereof in the FET phase. The researcher sought to listen to information gained from the participants' answers and construct meaning out of it.

4.5.2 Piloting the data collection instruments

The researcher had to ensure the content validity and suitability of the questions by pre-testing and validating them by means of a pilot group from another school with similar characteristics to the sample population (see Cohen, Manion & Morrison 2018:262; Creswell 2016:239; De Vos *et al.* 2011:237). This simply means that the measuring instruments were tested to establish whether they were appropriate to uncover the data required to answer the three research sub-questions on the effects of condonation.

The feedback obtained from the pilot study assisted the researcher to determine whether the measuring instruments actually measured the effects of condonation on learners and whether there was a need to improve the quality of the questions or change them. Where necessary, the questions were tweaked to ensure they were appropriate to uncover the data required to answer the three

research sub-questions. The value of the pilot study was to improve the success and effectiveness of the empirical tool used. The researcher discovered that piloting the questions was helpful because it assisted him to "practise" conducting the focus group interviews and individual teacher interviews. The information gained from the pilot process was used to improve the quality of both the interview questions and the conduction of the focus group interviews and individual teacher interviews.

4.6 Data collection instruments

4.6.1 Focus group interviews

Focus group interviews usually have unstructured, open-ended questions in a qualitative approach with the intention to elicit the opinions and views of the participants (De Vos *et al.* 2011:361). Group collaboration is usually employed in a focus group for the views of the participants to emerge collectively (Cohen *et al.* 2018:532).

The researcher personally conducted the interviews with the focus group learners. He took on the role of a moderator or facilitator who led the group conversations and guided and maintained focus on the topic under discussion (see De Vos *et al.* 2011:366). The size of a focus group varies from five to ten members. Based on the research questions, the type of focus group used and the relevance of the focus groups to the investigation, the researcher used five condoned learners for each focus group, that is, for the 2016 and 2017 cohorts that constituted the empirical study.

The advantages of using a focus group interview in a qualitative inquiry are as follows (Cohen *et al*. 2018:532):

- Data are obtained that may not be gained from other types of interviews.
- It is economical in terms of time as it often yields a large quantity of data in a short period.
- It allows the participants to work in a harmonious, discursive social environment.

Conducting focus group interviews was an effective technique to extract data on the effects of having been condoned in mathematics in the senior phase and promoted to the FET phase without receiving any academic support. The learners' collaborative feedback provided the researcher with a good understanding of their experiences on being condoned.

However, conducting focus group interviews also has the following limitations (Cohen *et al*. 2018:533):

- Interaction by some members may dominate and result in others not participating.
- The number of topics to be discussed may be restricted.
- Disagreement and conflict may arise among the members of a focus group.
- Some members may be unable to express their ideas and feelings clearly; consequently, they may be denied the opportunity to express themselves, which would affect the reliability of the study.

By conducting interviews with two focus groups, the researcher would be able to gain data from the participants through their views and opinions on the phenomenon they had experienced (see Creswell & Creswell 2018:298). The condoned mathematics learners would be able to share their experiences on having been condoned and then promoted to the FET phase without academic support. Using focus group interviews would allow the learners to interact without inhibition to produce rich data. Each focus group interview took approximately an hour to complete. The atmosphere in the focus group interviews was relaxed, and the learners were provided with refreshments to enhance the social environment.

The focus group interviews and semi-structured interviews were recorded in the form of field notes and audio recordings. The field notes were used to complement the data from the audio recordings, which assisted the researcher to ensure completeness of the oral exchanges and provide information for reliability checks (see McMillan & Schumacher 2006:355). The researcher transcribed the audio recordings of the participants' interviews. After the transcriptions were completed, the researcher compared these with the field notes. This provided a clear description of all interactions and statements that emanated from the interviews. The researcher developed a rapport with the participants by being friendly, listening attentively to them and showing respect to them (see Creswell & Creswell 2018:239).

Due to the lack of details given about the study, the possibility of participants "preparing" their answers was eliminated. The participants were reminded that there would be no right or wrong answer; therefore, they needed to be truthful about their experiences of being condoned. They were also informed that there would be no monetary gain for participating in the interview other than the fact that their participation would possibly contribute to achieving a better understanding of

the effects of condonation. The researcher assured the participants that their responses would be recorded as anonymous.

Furthermore, the researcher validated the data gained from the first interview against the data from the second interview. The validation showed a close similarity in the responses of both interviews.

4.6.2 Semi-structured interviews

An interview is described as a dialogue between an interviewer, asking questions to a participant to gain an understanding of his or her beliefs on and opinions of the world or a phenomenon of mutual interest (Cohen *et al*. 2018:506; Creswell 2016:93). The aim of conducting semi-structured interviews was to gather rich data on the effects of condoning senior phase mathematics learners and promoting them to the FET phase to help the researcher understand the participants' building of knowledge.

The researcher used a semi-structured interview technique with the mathematics teachers to validate the data gained from the focus group interviews (see Creswell 2016:93). The research questions were based on a given topic, and open-ended questions were posed to gain data on the participants' views and experiences of a specific occurrence (Cohen *et al.* 2018:199). Using semi-structured interviews gave the researcher flexibility in the interview process. In other words, the researcher was able to approach a problem in a specific way once it surfaced, allowing the participants to be more expressive (see De Vos *et al*. 2011:351).

Before the interviews were conducted, the researcher developed an interview schedule. The interview schedule was a list of questions that had been predetermined before the interviews with the individual teachers (see De Vos *et al.* 2011:352). The schedule encouraged the researcher to critically think about possible direct answers from the participants or the probable difficulties in the interview process and how to obviate them. De Vos *et al.* (2011) assert that after discovering the possible hindrances in the interview process, the researcher can now consider a wide range of questions or themes that should be asked.

An advantage of semi-structured interviews is that it allows a researcher to collect factual data and to grasp the participants' ideas, beliefs, views and opinions of a related phenomenon (Creswell 2016:93). This enabled the researcher to collect data from individual teachers who might

recommend solutions to the poor performance of condoned senior phase mathematics learners. The individual interviews were audio recorded and thereafter transcribed by the researcher, so that during the data analysis, if the researcher needed to reference the transcripts, he would be able to compare notes by re-playing the recordings.

Disadvantages of conducting interviews, according to Adams (2015:493), are that it takes up a lot of the researcher's time, is an arduous task and requires the ability to think of questions based on the articulacy of the participants during the interview process. Another disadvantage is that it is a laborious task of examining voluminous amounts of data and sometimes many hours of audio transcripts (Adams 2015)

It was crucial to this research that prior knowledge from the literature on the condonation of senior phase mathematics was known to the researcher (see De Vos *et al.* 2011:358). This would help in developing open or a general type of questions to allow sufficient room for the participants to express their thoughts on and experiences of condonation. To gain clarity or more information on the responses from participants, probing, open-ended questions may be posed to them (Adams 2015:494; Pule 2019:95).

4.6.3 Document analysis

Document analysis entails the scrutiny of available documents to uncover a deeper meaning and understanding of concepts or phenomena (De Vos *et al.* 2011:377). Such information may not be available during the interview process (Pule 2019:98). Document analysis, together with the other two forms of data collection techniques, would be used in the triangulation of the data.

Creswell (2016) maintains that the advantages of document analysis are that the data analysis can be done over a length of time and at the researcher's convenience, documents can be presented as written evidence and the participants may learn new words. According to Bowen (2009), document analysis also has limitations, such as documents not having sufficient information to answer the research questions because they are intended for purposes other than research. Also, the availability of documents becomes a problem because of poor storage ability.

The researcher favoured documentary analysis to augment the other two data collection techniques and to triangulate the end results of the data gained. An analytical comparison between the data

obtained from the semi-structured interviews, the focus groups and the document analysis offered a comprehensive understanding of the effects of condoning senior phase mathematics learners and promoting them to the FET phase without academic support.

Year-end schedules and district performance reports are examples of field documents that were studied and analysed.

4.7 Data analysis

Once the data have been collected by the researcher, they should be systematically arranged so that an understanding of the phenomenon under review can be reached. This involves a breakdown of the different sources of data sets by analysing and making sense of the feedback and then collating the data into information (Creswell & Creswell 2018:245). The objective of analysing data is to interpret the relationships and produce new information according to the aims of the study, accompanied by logical explanations. Data analysis entails the analysis, organisation, description and reporting of emergent themes, followed by a write-up of the findings and linking it with the existing body of knowledge.

Thematic analysis is a procedure used to identify, analyse and report patterns (themes) within data collected by a researcher (Braun & Clarke 2006:81). The researcher used thematic data analysis and examined the data obtained from the participants and then presented the data analysis in a meaningful way.

4.7.1 Thematic data analysis

Thematic data analysis requires the researcher to identify familiar themes from the participants' feedback from the data collection process. Braun and Clarke (2006) have chronicled six phases in analysing data, namely becoming familiar with the data, generating initial codes, searching for themes, reviewing themes, defining and writing the themes and producing a report. The use of thematic analysis permitted the researcher to be submerged in the data by reading the transcripts of the interviews. The way in which the six phases of thematic data analysis were followed is set out below:

- Becoming familiar with the data: The researcher transcribed the data and then read the manuscript repeatedly, noting down initial ideas.

- Generating initial codes: The researcher coded interesting characteristics of the data systematically, collecting data relevant to each code.
- Searching for emerging themes: The researcher collated the codes into possible themes, appropriately associating codes to each potential theme.
- Reviewing the themes: The researcher had to verify whether the themes matched the coded extracts (Level 1) and the data set (Level 2), thereby developing a thematic table of the analysis.
- Defining and naming the themes: The researcher further analysed the themes to create clear and defined names for each theme.
- Producing the final report: The final analysis required the selection of important extract examples, the final analysis of the selected extracts and then associating them to the research questions and literature, producing an academic report.

The researcher posed questions to the participants to gain data for each generated code. The data gained from answering the questions based on the research sub-questions were then used to generate codes. From the codes, themes were identified throughout the interview process to reach a repeated pattern of meaning. The themes were categorised according to the information gained from the responses and have a prevalence of meaning from all the feedback provided by the participants. This is evident from the different participants who gave a similar response in the same categories (see Braun & Clarke 2006:82).

The categories were obtained from questions coded as "the effects of condonation and promotion on learners' performance", "condoned learners require academic support" and "support strategies to assist condoned learners to improve their performance". These codes were used to categorise all the collected data to develop themes. When all the data had been categorised, the researcher developed themes for the data.

The other code emerged from the data saturation as a new lens for the participants. There was a general undertone from the participants' feedback that support (emotional or moral) offered by parents, peers and teachers affected condoned learners' performance in mathematics. The categories were defined on the prevalence of emotional and moral support provided by parents, peers and teachers. From the data obtained, "social support" emerged as a theme.

The researcher used an independent coder to oversee the data analysis and synthesis. This ensured the accuracy of transcribing the voice recordings to text, the relationship between the research questions and data, and collating the data into information in the final report (see Creswell & Creswell 2018:252).

The objective of interviewing the participants was to seek an answer and explain the three research questions on which the empirical study was based. Therefore, three codes were generated from the data, using three sub-questions. These questions were coded as follows:

- The effects of condonation and promotion on learners' performance
- Perceptions of condoning learners without academic support
- Support strategies to improve learners' performance

4.7.2 Content analysis

Content analysis is the process of constructing a summary and a report based on the interpretation of data by identifying patterns, themes or bias (Cohen *et al*. 2018:674). This means that the researcher consciously progresses from the analysis of manuscripts to the assimilation of knowledge.

Weber (1990:9) states that content analysis includes the coding of open-ended questions and disclosures from focus groups or individuals. Cohen *et al*. (2018) also explain that content analysis can be applied to written documents, with manuscripts ranging from personal interviews to focus group interviews, followed by an ordered sequence of content analysis. A huge volume of data can be interpreted and reported on.

4.7.3 Reliability and validity

The researcher used the proper procedures to ensure the validity and accuracy of the findings (see Creswell & Creswell 2018:251). The validity of the interview questions lies in the evidence that these have gained what they had intended to measure and that the findings of the data collection and instrumentation are sound (Cohen *et al.* 2018:245).

Face validity is based on the researcher's personal understanding of the effectiveness of interview questions at a glance and intuitively concluding how effective they were in gaining the data they had been intended for (Creswell & Creswell 2018:240). In other words, face validity means the

claim a researcher makes by looking at the design of the questions and concluding that they measure what they initially were designed to measure (Cohen *et al*. 2018:271). The different questions were designed to elicit rich data from the participants on the effects of condonation on senior phase mathematics learners and, thereafter, were given to the supervisor of the study for scrutiny and moderation.

Content validity refers to measuring tools and whether the questions they contain measure the content they were intended to measure (Creswell & Creswell 2018:206). It also refers to the scope by which a data collection instrument covers the "complete content of a particular construct that it is set out to measure" (Creswell 2016:240). Content validity in interview questions posed to participants must demonstrate that it "fairly and comprehensively covers the domain or items that it purports to cover" (Cohen *et al*. 2018:257). The researcher used his own common sense to determine the content validity of the questions, that is, whether the questions designed would uncover the data needed to effectively answer the three research sub-questions.

To ensure the validity of the questions used in the research instruments, the researcher also considered the following threats pointed out by Creswell (2016:241):

- The research instrument should be reliable, and to ensure the reliability thereof in this study, the researcher recorded the procedures of the study being conducted.
- To avoid having the participants agree to all of the questions, the researcher formulated positive and negative questions.
- The researcher generated open-ended research questions that would reduce the phenomenon of social desirability.

Reliability refers to the results obtained after the use of data collection tools at different times, where the gains are the same (Creswell 2016:238; De Vos *et al.* 2011:177). To ensure the reliability of the interview questions, the researcher removed ambiguous questions, standardised the conditions for the interviews, pilot tested the interview questions at a school similar to the school under review and moderated the level of questions used after piloting them.

4.7.4 Strategies for rigour

Gill and Gill (2020:57) postulate that rigour refers to either or both methodical meticulousness and precision or criteria used to determine the trustworthiness of the outcomes. Maher, Hadfield,

Hutchings and De Eyto (2018:3) suggest that trustworthiness is considered to be a more appropriate criterion for evaluating research of a qualitative nature. Guba and Lincoln (cited by Maher *et al*. 2020:3) propose that for data analysis to be trustworthy, it should satisfy four criteria, namely credibility, transferability, dependability and confirmability.

Credibility should be able to answer the question: How compatible are the findings with the real world? (Creswell 2016:123). To ensure the credibility of the study, the researcher ensured that the following points were adhered to:

- Use a well-established research method, a research design complementary to the research questions and a theoretical framework that has an overarching reach on the research questions and methods: A qualitative research design was used for the case study, and social constructivism as a theoretical framework underpins the research questions and methods of inquiry.
- Ensure a build-up of familiarity with the participants of the study, purposive sampling and detailed data collection methods: The researcher met with the participants twice informally to build up a relationship and assured them that their participation was anonymous and they might exit the study whenever they wished to. The researcher kept detailed field notes and audio recorded the interviews.
- Conduct member checking: After the interviews with both the focus groups and the teachers, the researcher allowed the participants to peruse the transcripts, and where necessary, errors were negotiated and resolved amicably.

The transferability of a data analysis refers to the non-generalisation of claims, and it allows the reader to identify some of their experiences with specific aspects of the study. Participants should be representative of the phenomenon under review. The participants in the study were condoned mathematics learners and mathematics teachers who were teaching condoned learners in the FET phase. The transferability of data is dependent on the following criteria, which were observed in the study:

- Thick description is a technique used to increase the transferability of a study. The researcher provides the reader with a fully detailed report of the context, the participants and the research design so that the reader can make up his or her own thoughts on transferability.

- Another technique used to increase the transferability of a study is purposive sampling. The researcher gave a lot of thought to the selection of participants as representative of the entire population who experienced the effects of condoning senior phase mathematics learners and promoting them to the FET phase. The sample learners shared similar experiences on the phenomenon under review; therefore, a smaller sample size, based on the resemblance of the population, would be sufficient to use in the study. The criterion selected simplified the selection of mathematics teachers; hence, two teachers were chosen.
- Dependability is evident through the research design and the execution thereof. Throughout the study, the researcher kept a journal of the decisions made, especially during the collection and analysis of the data. These field notes would give the reader insight into the researcher's thoughts and feelings. From the start of the data analysis to the outcomes of the study, the reader can follow the researcher and understand with reasoning the decisions that were made in the research.

Confirmability refers to the findings of the study being influenced by the participants and not by the researcher's motivation, interest or prejudice. Triangulation is a method used to increase confirmability, which includes data having been collected through different data sources, for example, semi-structured interviews, focus group interviews and document analysis (Creswell & Creswell 2018:332). However, according to Creswell (2016:43), the term "crystallisation" is preferred as opposed to the term "triangulation" because of its being a better lens to understand the different constituents that build up the study. Therefore, different data sources, including interviews, focus groups and document analysis, were used to enhance the trustworthiness of the study.

4.7.5 The role of the researcher

The researcher gained access to the school by requesting permission on three levels, firstly from the provincial education department, secondly from the district education department and lastly from the school principal as discussed in the ethical considerations. The researcher was also responsible for the following, as proposed by Creswell (2016:44):

- Preparing and conducting semi-structured interviews
- Preparing and conducting focus group interviews

- Transcribing audio recordings
- Conducting data analysis
- The crystallisation of data

The researcher had to factor in the school examination timetable, the dates and times for meeting the condoned learners and the logistics for the second interview. The required number of learners who had been condoned in 2016 and 2017 was selected. The researcher drew up a management plan in consultation with the head of the department. Tables A and B represent the management plan that was utilised to meet the learners to conduct the interviews with the 2016 and 2017 cohorts. Each cohort was identified and interviewed separately.

Table 4.1: Management and activity plan for the 2016 cohort in Grade 11 in 2019

No.	Date and time of examination	Examination paper	Time to meet focus groups	Activity with learners
1.	8 November 2019 8:30-10:00	Mathematical Literacy Paper 1	10:30-11:30	1.1 Meet learners as per name list 1.2 Hand out consent and indemnity forms to learners for parents 1.3 Hand out assent forms to learners 1.4 Explain the above to learners
2.	11 November 2019 8:30-10:00	Mathematical Literacy Paper 2	10:30-11:30	2.1 Collect consent and indemnity forms 2.2 Collect assent forms 2.3 Conduct interview

The researcher met the condoned learners for the first time on 8 November 2019, immediately after the mathematical literacy examination. After the introductions had been made by the head of the department, the researcher explained to them the need for the study and the reasons for selecting them as the sample learners of the study. The researcher then clarified to the learners the need for the consent and indemnity of their parents as well as the assent forms of the learners. The sample learners were compliant, and 11 November 2019 was mutually agreed on as the date to

meet again for the interview. Everyone agreed on 10:30 to 11:30 as the time when the interviews would be held.

Table 4.2: Management and activity plan for the 2017 cohort in Grade 10 in 2019

No.	Date and time of examination	Examination paper	Time to meet focus groups	Activity with learners
1.	8 November 2019 08:30-11:00	Tourism	12:30-13:00	1.1 Meet learners as per name list. 1.2 Hand out consent and indemnity forms to learners for parents 1.3 Hand out assent forms to learners 1.4 Explain the above to learners
2.	11 November 2019 08:30-11:00	Zulu Home Language	12:00-13:00	2.1 Collect consent and indemnity forms 2.2 Collect assent forms 2.3 Conduct interview

The researcher met the 2017 cohort of condoned learners for the first time on 8 November 2019 immediately after their tourism examination. After the introductions had been made by the head of the department, the researcher explained the need for the study and the reasons for selecting them as the sample learners of the study. The learners were very keen to participate because the outcome of the study could offer a solution to their poor performance in mathematics.

The researcher then clarified to the learners the need for the consent and indemnity of their parents as well as the assent forms of the learners. The sample learners were compliant, and 11 November 2019 was mutually agreed on as the date to meet again for the interview. The researcher negotiated the time of 12:00 to 13:00 for the interviews, which was agreed on by the learners.

4.8 Ethical considerations

When a researcher conducts research on human beings, it is always intrusive on their lives. Therefore, researchers are duty-bound to uphold the rights, needs, values and desires of the participants (Creswell 2016:257). One way of ensuring this in the current study, was for the researcher to apply for ethical clearance from the University of the Free State. Ethical clearance

ensures that the research study is properly planned and meets the requirements of institutional approval, informed consent, honouring commitments and the honest reporting of data (De Vos *et al.* 2011:128). So, before the researcher could embark on the study, he applied for ethical clearance from the Ethics Committee (see Appendix A). The researcher's application was successful (see Appendix B).

When research is conducted, the research design should bring about valid conclusions and the researchers must be competent to carry out the proposed research activities without inflicting harm on the participants. The *Ethics in Health Research Principles, Processes and Structures* document of the Department of Health (2015) contains the national policy for conducting research responsibly and ethically in South Africa on live participants. The researcher chose to use the ethics code of this policy as a guide to conduct research, as the study was based on condoned learners and the ethics code would safeguard the human participants.

A researcher who conducts a study using human participants is obligated to ensure that the research is responsible and ethically sound. Therefore, the study was based on the principles that underpin ethics in a study, namely permission to conduct research, a fair balance of risks and benefits, informed consent from the participants and the privacy and confidentiality of the participants (see Department of Health 2015:14).

4.8.1 Permission to conduct research

The researcher sought permission to conduct research from the DBE at three levels – firstly at the provincial level, then at the local district level and lastly, at the school level. The researcher was successful in all three levels of application (see Appendices C, D and E). The study began immediately after the researcher had received ethical clearance from the school.

4.8.2 Fair balance of risks and benefits

Researchers should conduct a risk analysis of the participants before the actual commencement of the research, as the participants may be exposed to physical or emotional risks as a result of the interview process. According to the policy *Ethics in Health Research Principles, Processes and Structures* (Department of Health 2015), participants experience a fair balance of risks and benefits in a study when the potential risk of harm to the participants is low and outweighs the benefits of

their participation. The researcher took the necessary precaution to minimise the risks to which the teachers and learners might be exposed because the findings of the study would have huge implications for the condonation of mathematic learners in Grade 9.

The questions that were used in the interview process neither were intrusive nor did they infringe on the rights of the participants. The questions were formulated with the assistance of the supervisor of the study and were used to apply for ethical clearance from the intuition. The safety of the participants was guaranteed because the interviews were conducted on a normal school day during school hours. The school was well secured with CCTV cameras, an automated gate and security guards on site.

4.8.3 Informed consent from the participants

The participation of the selected candidates in a research study must be voluntary and based on informed choices. Hence, the informed consent process takes place prior to the commencement of the study and is repeated throughout the study (DBE 2015:15).

The researcher met with the participants separately, prior to the commencement of the interview process. He met the teachers first and then the learners and explained the objective of the study, their participation and the duration of the study to them. The teachers were given informed consent forms to complete (see Annexure F). The learners were given informed consent forms for their parents to give them permission to participate (see Annexure G), while each learner also had to complete an assent form (see Annexure H). The informed consent forms and assent forms were collected on the day of the first interviews.

The teachers and learners were informed that their involvement in the study entailed being interviewed on the effects of condonation on Grade 9 mathematics learners who were promoted to the FET phase with no academic support. The researcher also explained to them that the interviews would be audio recorded and field notes would be taken. They were assured that both their identity and the identity of the school would be withheld in the interview process and the final report.

The teachers and learners were informed that they would not receive any imbursement for their contribution to the study. The researcher expressed his appreciation to them for participating in the study, but assured them that they had the right to withdraw from the study at any given time. Once

the participants and their parents were *au fait* with the terms of reference of the research, they completed and signed the consent forms and assent forms.

4.8.4 Privacy and confidentiality of participants

The policy *Ethics in Health Research Principles, Processes and Structures* (Department of Health 2015:15) declares that participants in a study have the right to privacy and confidentiality. These rights are also enshrined in the Constitution of South Africa and, therefore, must be protected during research. To prevent the disclosure of information that might identify the participants, they were given pseudonyms. The teachers were named Teacher 1 and Teacher 2, while the learners for each cohort were named Learner 1 to Learner 5.

The participants were reassured that their contribution from the interviews would be used to understand the effects of condonation on senior phase mathematics learners who are promoted but not academically supported in the FET phase. They were also informed that only the researcher and the institution would have access to their personal information and the data collected; no other unauthorised persons would have access to these particulars. It is required that data gathered in the study are safely stored. Therefore, the researcher stored all hard copies in a safe location on the researcher's personal property, while the soft copies are stored on a laptop with access thereto via a pin code.

4.9 Significance of the study

This study will possibly provide more knowledge and understanding of condoning and promoting senior phase mathematics learners to the FET phase and the learning support that may be provided to help overcome their gaps in knowledge. This may equip mathematics teachers to improve learner performance levels in mathematics at the NSC level. The study will further contribute to the existing knowledge of the effects of condonation on the promotion of senior phase mathematics learners to the FET phase without their being academically supported in the Phumelela circuit in Newcastle.

The study may, therefore, serve as a guiding document for the Newcastle education department for further learning support programme that may be instituted at the district level. Furthermore, the study can be used to inform the DBE and local schools in developing and implementing

appropriate academic support programmes to improve the performance levels of condoned mathematics learners in the FET phase.

4.10 Limitations of the study

The research was conducted at a selected high school in the Newcastle circuit of the Amajuba district in KwaZulu-Natal. Therefore, the study is not representative of the other schools in this district or elsewhere in South Africa.

The second limitation is the sample size, which consisted of learners who remained in school after being condoned. Learners who exited Grade 10 after being condoned in Grade 9 mathematics were not available for the interviews.

4.11 Summary

This study used a case study approach with a case study paradigm. The empirical undertaking was conducted on mathematics teachers and condoned learners. The study focused on learners who had been condoned in Grade 9 mathematics in the years 2016 and 2017 respectively. The researcher used purposive sampling to select five learners for each focus group and two mathematics teachers for individual interviews as the sample participants. The research was conducted at a high school in Newcastle in the Amajuba district.

The researcher used thematic data analysis to examine the effects of condonation on the promotion of senior phase mathematics learners to the FET phase. For the data analysis to be trustworthy, the researcher ensured that it met the criteria of credibility, transferability, dependability and confirmability. The researcher ensured content validity by pre-testing the interview questions on a pilot group with similar characteristics from another high school.

Ethical clearance was obtained from the host institution. Thereafter, the researcher sought and obtained permission to conduct the research from the provincial education department, the district office and the school. The researcher was guided by the policy on ethics of the Department of Health to conduct the research with the participants.

Chapter 5: Empirical results

5.1 Introduction

The results of the study are offered in this chapter, including a data presentation and analysis. Data attained from the semi-structured interviews with mathematics teachers, focus group interviews with condoned senior phase learners and the document analysis are presented. The data are presented and analysed to address the objectives and respond to the research questions provided in Chapter 1.

The researcher used thematic data analysis to analyse the data. Thematic data analysis is a procedure of generating codes based on the research questions of the study (Braun & Clarke 2006:79; Creswell 2018:333). The collection of data consists of interviews from the focus group interviews with the 2016 and 2017 cohorts of learners and semi-structured interviews with mathematics teachers. The researcher developed themes from the data collected. Each theme was further divided into categories. The analysis begins with the semi-structured interviews, followed by the focus group interviews and the document analysis.

5.2 Results of thematic analysis

The researcher did not rule out the likelihood of overstressing or minimising some perceptions. Subsequently, all rational efforts were made to gather and record data effectively. The results are grounded on the philosophical method that sees an individual in his or her own world so consistent that basically, the one has no existence devoid of the other.

The researcher saw social realism as exclusive; thus, he comprehended the teachers' and learners' conduct solely by focusing on the meanings that the event had for the participants involved. Furthermore, he considered not only what the participants did but also how they felt. He also made an effort to recognise the genuineness of the presented data. The data were narrated to comprehend the social certainty experienced by the participants. Moreover, the researcher did not know beforehand how naturally arising events would develop or what variables might be significant. The researcher sought to seek the participants' perceptions on the effects of condonation on senior phase mathematics learners. The precise details of the interviews are provided in the interview schedule below.

Table 5.1: Details of interview schedule in 2019

Type of interview	Date	Time of interview	Composition of interviewees	Present grade	Number of participants	Location of interview
Semi-structured	4 November 2019	9:00-9:30	Mathematics teacher	Currently teaching Grade 9 to Grade 12 mathematics and mathematical literacy	1	School hall
Semi-structured	4 November 2019	10:00-10:28	Mathematics teacher	Currently teaching Grade 9 to Grade 12 mathematics and mathematical literacy	1	School hall
Focus group	8 November 2019	11:00-11:30	2016 cohort of senior phase learners	Grade 11	5	School hall
Focus group	11 November 2019	10:45-10:20	2017 cohort of senior phase learners	Grade 10	5	School hall

According to Sagoe (2012) and Carlson and Glenton (2011), the rule of data saturation directs the study when there is a repetition of themes and no new data are gained. In both interviews, data saturation was reached. A set of pre-determined questions was used to solicit an understanding of the attitudes towards, and views and opinions of, the effect of condonation on senior phase learners. The researcher accelerated the process by posing a question at a particular point interval. The data are presented under categories that have arisen during the data analysis and interpretation of the results. The responses of the participants are presented verbatim.

5.2.1 Semi-structured interviews

From Research Question 1, "How does the condonation and promotion of Grade 9 learners to Grade 10 affect their mathematics performance?", Theme 1 emerged, namely "The negative effects of condonation and promotion on mathematics learners' performance in the FET phase".

In response to the question "In your experience with the Grade 10 learners, how did the learners' condonation in Grade 9 mathematics affect their academic performance in Grade 10?", the participants commented as follows:

> *Those that [had] been condoned, what you call, they did not get the pass requirement. So, it means there are gaps that have been left out that have not been filled.* (Teacher 1)

> *These learners lack in basic maths; the simple knowledge in maths they don't have. Like the simple things in multiplication and the exponents, the difference in multiplication and exponents, those things, if you are talking of multiplication as well as the numbers for exponents; so they end up not understanding the relationship. They struggle with [the] basics in the subject when they move to Grade 11.* (Teacher 2)

Both teachers asserted that some mathematics learners had not met the minimum pass required and, therefore, had been condoned. Their responses suggested that condoned mathematics learners lacked some of the subject content from the previous grade. The interviewees contended that condoned learners struggled with the basics in the subject matter as they had been promoted to the higher grades. This is in line with findings by Statistics South Africa (2015:53) and Reddy and Nair (2015:112) that condoned learners were progressed without meeting the requirements and, therefore, lacked the foundational knowledge in mathematics, which they should have mastered in the senior phase.

Teacher 1 gave the following response:

> *Whenever the learner comes to Grade 10, so maybe after a quarter, that learner needs to change from mathematics to mathematical literacy because that learner is struggling after being condoned from [sic] Grade 9 mathematics.*

Teacher 1 argued that condoning senior phase mathematics learners and progressing them to the FET phase negatively affected their performance and resulted in their changing to mathematical literacy. The data from the interviewees revealed that condonation had a negative effect on the performance of mathematics learners (emergent theme) because they did not possess the basic mathematical knowledge (category). This trend was noted by the DBE (2015), as there was a higher enrolment for mathematical literacy than mathematics because condoned learners struggled with mathematics and then failed FET mathematics (Umalusi 2015:91).

However, condoned learners are promoted, which results in their struggling with FET mathematics, according to the following responses:

> *If they struggle, you need to start afresh, as if you are still teaching them the Grade 9 work.* (Teacher 1)

> *We must arrange some time to assist them to fill up those gaps they are lacking in that grade.* (Teacher 2)

Both teachers conceded that condoned mathematics learners should be retaught the subject matter they had not acquired in the previous grade. Hence, condoned learners need remediation of the mathematical content they did not master, and this includes reteaching (Oktavianty *et al.* 2018:4). This suggests that condonation has a negative effect on learners' mathematics performance levels in the FET phase because they lack foundational knowledge. The view that condoned mathematics learners are promoted to the FET phase while lacking the grounding knowledge and then struggle with the subject matter is shared by scholars such as Spaull (2013:6).

From the interviews with the teachers, the data revealed that condoning mathematics learners in the previous grade resulted in their struggling with learning FET mathematics. The data further disclosed that condoned learners did not acquire the basics concepts in the subject matter; therefore, they should be retaught these concepts.

The categories that emerged for Theme 1 are as follows:

- There is a lack of basic mathematics content
- Learners opted for mathematical literacy instead of mathematics in the FET phase
- Learners need to be retaught subject matter

Research Question 2 was "What are the perceptions on condoning learners and promoting them to the FET phase without providing them with learning support?", from which Theme 2 emerged, namely "Condoned learners need academic support to improve their performance levels".

In response to the questions "How do you think learners will cope with mathematics in Grade 10 after being condoned in mathematics and mathematical literacy in Grade 9? Do you think they need to receive a support programme", the participants commented as follows:

> *Yes, it will definitely assist the learners.* (Teacher 1)

> *On their own, I do not think they will cope without going through extra classes, without going to those private institutions*. (Teacher 2)

Teacher 1 responded that an academic support programme would improve condoned learners' performance in FET mathematics. Teacher 2 stated that in the absence of academic support, condoned learners would perform poorly and not pass FET mathematics. The interviewees contended that condoned mathematics learners needed academic support to improve their performance levels in FET mathematics. Similarly, other scholars recommend academic support, either by reteaching or extra classes, to underperforming learners (Brophy 2006:5; Tani 2018:92). According to these scholars, without academic support, such learners would perform poorly in mathematics.

In response to the question "What is your opinion on condoning learners in mathematics in Grade 9 and then promoting them to Grade 10 without providing them with any form of academic support?", the participants commented as follows:

> *If there is no support programme, they wouldn't, what you call, have no [sic] good performance*. (Teacher 1)

> *Ay, we will be having [sic] learners that will be really struggling*. (Teacher 2)

The participants were of the view that condoned senior phase learners struggled to achieve good levels of performance in FET mathematics when no academic support was provided to them. Their responses suggest that condoned mathematics learners require academic support to be successful in FET mathematics. They maintained that condoned learners needed academic support to improve their mathematics performance in the FET phase. This finding seems to correlate with Mavuso's

(2014) recommendation that academic support should be given to condoned learners who experience difficulty in achieving good levels of performance in mathematics.

In response to the question "How do you think an academic support programme will improve the Grade 10 mathematics performance of learners who had been condoned in Grade 9?", the participants commented as follows:

> *If the [sic] academic support is given to them, that will improve on [sic] their skills on what they know*. (Teacher 1)

> *It will improve the learner's results*. (Teacher 2)

Teacher 1 argued that the content knowledge of condoned mathematics learners would be improved if they received academic support. Teacher 2 stated that an academic programme would improve learners' mathematics performance in the FET phase.

From the interviewees' responses, the data suggest that the mathematics performance levels of condoned learners would be improved if they received academic support. The participants' opinion is shared by the DBE (2020), who states that providing academic support to condoned learners who experience difficulty in achieving good results would be of benefit to them.

In response to the question "What, in your view, are the effects of condoning learners who are not adequately supported as prescribed by the policy?", the participants commented as follows:

> *We find that, as I can state, it has an effect because you find most of the learners failing … there are more learners failing in Grade 10 than in Grade 11. Some of them are still in school, while others exit the school because of frustrations caused by their failure in Grade 10 and 11*. (Teacher 1)

> *Without the [sic] support, there will be no improvement in Grade 10 performance … we are just having [sic] the learners now that will end up struggling and then failing then leave school, they will be lacking … basics. These learners should go to TVET [Technical and Vocational Education and Training] colleges. They should do some work using their hands.* (Teacher 2)

Teacher 1 stated that the majority of condoned senior phase mathematics learners failed Grade 10 mathematics if they did not receive academic support. The participant further suggested that

condoned learners eventually dropped out of school before reaching Grade 12 because of repeated failing and frustrations in FET mathematics.

Teacher 2 contended that condoned mathematics learners needed academic support to improve their Grade 10 performance; otherwise, they continued to fail and eventually dropped out of school. The teacher further suggested that learners who continuously failed FET mathematics should pursue training at a TVET college.

Both teachers asserted that most condoned mathematics learners failed Grade 10 because they did not receive academic support. These learners then struggled to pass FET mathematics and dropped out of school before completing Grade 12. This phenomenon has also been noted by the DBE (2015), stating that when no learning support was offered to condoned learners in the FET phase, it resulted in fewer than half the number of learners completing Grade 12 of the cohort that had started school in 2003.

From the response of Teacher 2, it became clear that condoned mathematics learners struggled with FET mathematics and consequently failed because they did not receive academic support. The data further revealed that struggling condoned learners should enrol in TVET colleges instead of dropping out of formal education. The National Qualifications Framework Act 67 of 2008 (DBE 2008) provides an alternative to condoned learners to pursue their education at a TVET college. Instead of condoned learners remaining in school and becoming frustrated by repeatedly failing mathematics, they can pursue their studies and complete a qualification in a trade (*Mail & Guardian* 2019).

The following categories emerged for Theme 2:

- Learners should receive academic support after condonation
- Without academic support, learners struggle to perform well academically
- With academic support, learners will improve their academic performance
- Condoned learners should enrol in TVET colleges

From Research Question 3 “How can condoned learners in the FET phase be academically supported to improve their mathematics performance?”, Theme 3 emerged, namely “Many support strategies exist to assist condoned learners to improve their performance levels”.

First, the researcher stated that the pass requirements for Grade 9 mathematics learners had been adjusted to 20% and 30% respectively. These learners were condoned and promoted to Grade 10, still having gaps in knowledge. When the question "How did you overcome this challenge, bearing in mind that mathematics is hierarchal?" was posed, the participants responded as follows:

> *We have tried to support them, by what you call, those that are having problems, although we understand that some learners, is to give the extra tuition [sic]*. (Teacher 1)

> *This is where we tried to offer the learners some extra classes … we must arrange some time to assist them to fill up those gaps they are lacking in that grade*. (Teacher 2)

The responses from the interviewees suggest that they attempted to provide supplementary teaching to condoned mathematics learners on the Grade 9 content they had not mastered. Both interviewees conceded that extra classes were aimed at reteaching the foundational knowledge that learners had not acquired. This view is also shared by Reddy and Nair (2015) and the DBE (2014), both stating that in preparation for learning FET mathematics, condoned learners need extra classes to undergo an academic support programme to receive the basics in mathematics they had not acquired. Therefore, extra classes are needed for condoned senior phase learners so that they can be retaught foundational knowledge in mathematics.

In response to an invitation to discuss an academic support programme that the teachers had offered that resulted in a positive or negative effect on learners' performance in Grade 10 mathematics, the participants commented as follows:

> *The support programme of [sic] which I offered to learners, ay, that one to improve on their performance in other words … I use the textbook as a guideline but in some stage, I put, what you call, some problems from previous question papers so as to make them aware that questions are asked in this way whenever they are writing a test*. (Teacher 1)

> *The support documents that have questions taken from previous question papers which must be used throughout schools with their solution so that learners can just revise such questions that are similar.* (Teacher 2)

Teacher 1 asserted that an academic support strategy should consist of previous examination papers and textbooks to expose condoned mathematics learners to examination-type questions. Teacher 2 concurred that academic support given to condoned mathematics learners consisted of past examination papers with memoranda for learners to work through.

Both teachers seemed to agree that an academic support programme consisting of working out past examination papers and textbooks would have a positive effect on condoned mathematics learners' performance in the FET phase. Similarly, the DBE (2020) attributed the success of the 2019 NSC support programme to its use of past question papers. This suggests that academic support consisting of the examination papers of previous years would contribute to an improvement in condoned learners' performance in FET mathematics.

In response to an invitation to briefly explain how effective the school-level structures are on providing support to Grade 10 learners to improve their performance levels, the participants commented as follows:

> *At our subject committee meetings, we are always talking about it: how can we improve on learners' performance, in the sense, we come with, what you call, we come with the problems, and at the same time we come up with solutions. If you may be having a problem … there must be, what you call, sometimes group teaching or team teaching so that maybe we can be able [sic] to swop, for instance, to swop lessons.* (Teacher 1)

The researcher then wanted to know what strategies the participants had informed the parents they were implementing to improve the learners' performance. Teacher 1 went silent and could not provide an answer. Teacher 2 responded as follows:

> *Ahh, not much support. You are the one who is the teacher that must work hard. Your DH [department head] is there; maybe your SMT [school management team] is there, but there is no support for Grade 10. They will support you the most for Grade 12; if you talk of Grade 10, it's like "your baby". They may provide you with previous testing like June exams, but not proper support. Their main focus is Grade 12*. (Teacher 2)

From the teachers' interviews, the data disclosed that despite the school having academic support-level structures, they were not active, and therefore, no academic support was provided. From the feedback of the interview with Teacher 1, the data showed that no academic support had been provided to Grade 9 condoned mathematics learners in Grade 10.

From the responses of Teacher 2, the data further revealed that the subject teacher was solely responsible for providing academic support to condoned learners in Grade 10. The data also showed that the school management absolved itself from such responsibilities and prioritised academic support for the Grade 12 learners.

The interviewees revealed that although school-level management structures did exist in the school, they were not very effective in providing academic support to condoned mathematics learners. According to Teacher 2, the subject teacher was solely responsible for providing academic support to underperforming mathematics learners in Grade 10, while the school management focused on providing support to Grade 12 learners only. This finding is in violation of the SIAS policy (DBE 2014), according to which all schools must establish an SBST to provide learning support to condoned learners with learning difficulties to improve their performance level.

The following categories emerged for Theme 3:

- Condoned learners should attend supplementary teaching
- Academic support programmes should consist of reference materials
- School-level structures are not effective in providing academic support

From the interviews with the participants, a fourth theme emerged from the data collected, namely "Social support affects condoned learners' performance". There was a general undertone in the participants' feedback that support (emotional or moral) offered by parents, peers and teachers affected condoned learners' performance in mathematics and mathematical literacy.

In response to an invitation to share any other experiences about the way Grade 10 learners were supported (or not) in mathematics in their school, the teachers commented as follows:

> *I would like to say that education, it is a three-[member] cycle where there is a parent, the educator and [the] learner. If they support each other, it will make it easier for us (teachers), that if I am at school and I am doing the work, the parent is checking if the child is doing the work at home. Then the parent can come to school*

with the child and discuss the problems the child is having. This will help the learners to do better. (Teacher 1)

I like to add that parent support must start from Grade 10, in selecting their subjects … this will help the learners to choose subjects that will assist them in passing. (Teacher 2)

Teacher 1 contended that parents' communication with mathematics teachers would allow parents to share the responsibility of teaching condoned learners struggling with FET mathematics. The data also showed that parents should seek assistance from the mathematics teacher to support learning at home so that condoned learners could improve their performance levels.

Both interviewees agreed that educating condoned learners was a tripartite relationship between the teacher, parents and learner that would result in improved learner achievement in mathematics. This finding aligns itself with Letshwene's (2019) claim that engagement with the parents of condoned learners struggling with mathematics is an effective strategy to improve learners' mathematics performance level. Also, the DBE (2014) advocates that parental involvement in providing academic support to condoned mathematics learners is important for them to improve in their achievement in FET mathematics.

The following categories emerged for Theme 4:

- Social support should be provided by parents

Table 5.2: Emergent themes and categories of semi-structured interviews

Codes	Categories	Emergent themes
Effects of condonation and promotion on learners' performance	• There is a lack of basic mathematics content • Learners opted for mathematical literacy over mathematics in the FET phase • Learners need to be retaught subject matter	The negative effects of condonation and promotion on learners' mathematics performance in the FET phase
Perceptions on condoning learners without academic support	• Learners should receive academic support after condonation • Without academic support, learners struggle to perform well academically • With academic support, learners will improve their academic performance	Condoned learners need academic support to improve their performance levels in mathematics

	• Condoned learners should enrol in TVET colleges	
Support strategies assisting condoned learners	• Condoned learners should attend supplementary teaching • Academic support programmes should consist of reference materials. • School-level structures are not effective in providing academic support	Many support strategies exist to assist condoned learners to improve their performance levels in mathematics
	• Social support should be provided by parents	Social support affects condoned learners' performance

5.2.2 Focus group interviews

From Research Question 1 "How does the condonation and promotion of Grade 9 learners to Grade 10 affect their mathematics performance?", Theme 1 emerged, namely "The negative effects of condonation and promotion on learners' performance in the FET phase".

The question posed to both cohorts of learners was "Are you currently doing mathematics or mathematical literacy? Give me a reason for your choice of subject in Grade 10". The responses from the 2016 cohort of condoned learners were as follows:

> *I did not meet the minimum mark required to do mathematics. I failed mathematics in Grade 9.* (Sifiso)
>
> *I also failed mathematics in Grade 9. The teacher told me I have [sic] to do mathematics literacy because my marks were bad*. (Thabo)
>
> *I am doing mathematics literacy because it is much easier than mathematics*. (Thabo)
>
> *I am also doing mathematics literacy because it is much easier than mathematics*. (Dumisani)
>
> *I also failed mathematics in Grade 9.* (Lerato)

The responses from the 2017 cohort were as follows:

> *Because mathematics literacy is much easier than mathematics.* (Simphiwe)

I agree that mathematics literacy is much easier than mathematics, that is why I am doing mathematics literacy. (Bonga)

I chose mathematical literacy because I think mathematics is kind of hard, and that is why I did not choose mathematics because it is hard. (Sthembiso)

Because they say you must reach a certain average to be able to enter mathematics. (Nothando)

I failed mathematics in Grade 9 so I had no choice; I had to choose mathematics literacy. (Sanele)

The majority of the participants asserted that they had failed Grade 10 mathematics after being condoned in Grade 9 and not receiving academic support in FET mathematics. Their responses suggest that their reason for choosing mathematical literacy instead of mathematics was because it was easier to pass and then they did not have to continue struggling with poor performance in FET mathematics. Nothando argued that as condoned learners did not attain the minimum percentage mark requirement, they had no other option but to take mathematical literacy in the FET phase.

From the interviewee responses, the data revealed that condoned senior phase learners chose mathematical literacy over mathematics because they struggled to pass Grade 9 mathematics. The data also showed that the condoned mathematics learners tended to agree with one another that mathematical literacy was easier than mathematics. This finding is shared by Umalusi (2015), stating that condoned senior phase learners choose mathematical literacy instead of mathematics in Grade 10, because they have failed mathematics in Grade 9. However, condoned learners have to take mathematical literacy in FET based on policy directives, guided by their final percentage mark at the end of Grade 9. Similarly, the DBE (2016) policy on condonation that guides teachers on condoning senior phase learners at 20% and 30% and promoting them to Grade 10 directs them to take mathematical literacy and mathematics respectively.

In response to the question “What are some of the learning difficulties you experienced in Grade 10 mathematics as a result of your being condoned in mathematics in Grade 9?”, the 2016 cohort commented as follows:

Thando admitted that he was slow to assimilate the Grade 10 content:

> *Sometimes it takes time for me to understand what the teacher is teaching in class.*

The responses from the 2017 cohort of learners were as follows:

> *I find myself lost with Grade 10 work because in order for you to understand the new work, you must know your Grade 9 work*. (Bonga)

> *The work in Grade 9 forms the foundation for the work in Grade 10 mathematics*. (Sanele)

> *I need to learn the foundation because in Grade 9, I did not learn well; that is why I am having difficulties in learning Grade 10 work*. (Sthembiso)

The interviewees confirmed that they experienced learning difficulties in Grade 10 mathematics because they had been condoned in Grade 9. Their feedback advocates that mathematics is hierarchal, and therefore, one needs foundational knowledge to acquire FET mathematics. The participants further asserted that they needed to be retaught Grade 9 mathematics so that their performance levels in FET mathematics could improve.

Moreover, the participants argued that condonation negatively affected the learning of FET mathematics because foundational knowledge was absent. Therefore, condoned learners struggled to learn FET mathematics, which affected their achievement. This participants' feedback concurs with Reddy and Nair's (2015) notion that condoning learners in the senior phase results in their experiencing a lack of foundational skills needed to do FET mathematics, which, in turn, leads to their struggling with poor achievement. The data also showed that the participants agreed that senior phase mathematics learners should be retaught basic knowledge for them to easily acquire FET mathematics. This is in agreement with the assertion of the DBE (2010) that learners need to master Grade 9 basic knowledge in mathematics so that they can acquire the FET content, as mathematics is hierarchal.

In response to the question "How have these learning difficulties affected your levels of performance in mathematics in Grade 10?", the 2016 cohort commented as follows:

> *It has caused me to perform poorly in mathematics*. (Sifiso)

> *I have seen a big drop in my marks in Grade 10. I was trying to catch up with Grade 9 work in Grade 10 that resulted in me losing focus on my Grade 10 and then I performed poorly in Grade 10*. (Dumisani)

> *I tried to work on my own and catch up with the Grade 9 work so I can learn the Grade 10 work … there is too much of [sic] work in mathematical literacy and I cannot cope*. (Thabo)

The participants suggested that condoned learners struggled on their own to learn foundational knowledge in mathematics. Their responses indicated that they became overwhelmed by learning Grade 9 and Grade 10 mathematics simultaneously, resulting in poor performance in mathematics because they lacked the basics. Therefore, to prevent this from happening, the DBE (2014) proposes that each learner experiencing difficulties in learning mathematics should have his or her own ISP, including academic support strategies to address his or her learning challenges as well as support from the SBST.

The interviewees declared that condoned senior phase learners experienced difficulty in achieving good performance levels in FET mathematics. The data also revealed that learners needed assistance to learn the foundational knowledge in mathematics, otherwise they eventually failed Grade 10 mathematics.

In response to the question "How have these learning difficulties affected your levels of performance in mathematics in Grade 10?", the 2016 cohort commented as follows:

> *I lost out on the Grade 10 work and then I failed Grade 10. I repeated Grade 10 and failed again but I was progressed to Grade 11. Now I cannot manage the Grade 11 work*. (Thabo)

> *I have also failed Grade 10 and repeated. I failed Grade 10 again and was also progressed into Grade 11. Currently, my mathematical literacy marks are bad. I am not coping*. (Lerato)

In the interview with the 2017 cohort, the following response was given:

> *Sir, in Grade 10 you will fail mathematical literacy because the information from Grade 9 mathematics you do not have*. (Bonga)

Bonga argued that being condoned in the senior phase resulted in his failing FET mathematics because he had not mastered the Grade 9 content. This argument is aligned with the finding of the DBE (2016) that the NSC results in mathematics were unsatisfactory because the majority of Grade 9 learners lacked basic knowledge in mathematics, which became evident at the Grade 12 level.

The other participants concurred with Bonga that their failure in Grade 10 was due to condonation. Their responses suggested that as they had not acquired foundational knowledge in mathematics due to their condonation, they failed to master FET mathematics, which resulted in repeatedly failing. This view concurs with that of Legotlo *et al*. (2002), that condoning learners and promoting them to a higher grade without their having acquired basic knowledge in mathematics contribute to their failing up to Grade 12.

From the data, it emerged that after repeatedly failing in Grade 9, learners were advanced to Grade 11 by the progression policy. Seemingly, these learners shared a similar experience of having been condoned in senior phase mathematics and subsequently failing mathematics in the FET phase

The interviewees indicated that condoned mathematics learners failed Grade 10 once, then repeated it and failed again. However, they were advanced into Grade 11 with the assistance of the progression policy and continued with poor performance in FET mathematics.

The categories that emerged for Theme 1 are as follows:

- Condoned learners choose mathematical literacy, which is easier
- Condoned learners need to be retaught the subject matter
- Condoned learners struggle to achieve good levels of performance
- Condoned learners are progressed after failing Grade 10

From Research Question 2, “What are the perceptions on condoning learners and promoting them to the FET phase without providing them with learning support?”, Theme 2 emerged, namely “Condoned learners need academic support to improve their performance levels”.

In response to the question “What academic support programmes did your teacher implement to help you improve your performance levels in Grade 10 mathematics?”, the 2016 cohort commented as follows:

We were given past year exam papers to work through it on our own so that we can understand the structure of the questions. It helps us a lot when it comes to exam time. (Thando)

For mathematics, we work a lot with past year papers and it helps us to improve on our maths marks. (Dumisani)

During the mathematical literacy period, they will help us with past year examination questions. (Lerato)

The responses from the 2017 cohort were as follows:

My teacher is giving [sic] me revision question papers for Grade 9. (Sthembiso)

Yes, my teacher also gives us past year examination papers to work on at home. (Simphiwe)

The 2016 cohort of learners conceded that mathematics teachers academically supported Grade 10 with past question papers. Their responses suggested that exposure to working with past examination papers improved their performance levels in the Grade 10 mathematics examination. Moore-Harris (2005:17) is of a similar view that presenting condoned learners with question papers of previous years as homework is regarded as a support strategy for teaching mathematics and improving learners' performance levels.

From the interviewees' responses, the data revealed that teachers academically supported condoned learners with examination papers of previous years. The feedback from the participants suggested an improvement in their performance levels in FET mathematics after their being exposed to previous years' testing instruments.

From Research Question 3 "How can condoned learners in the FET phase be academically supported to help improve their mathematics performance?", Theme 3, namely "Many support strategies exist to assist condoned learners to improve their performance levels", emerged.

The participants were invited to give an example of the kind of academic support the school had implemented to improve their performance in mathematics in Grade 10, to which the 2016 cohort responded as follows:

We were given past year exam papers to work on in after-school classes. (Thando)

For mathematics, we work a lot with past year papers. The past year papers are discussed as a whole class and then you go home and complete the paper. (Lerato)

The following responses were given by the 2017 cohort:

My teacher is giving [sic] me revision question papers for Grade 9 and we discuss it in class after school or during the breaks. (Stembiso)

Thando contended that he had been provided with mathematics questions papers of the previous year by his teacher, and collectively they worked on these after school. Stembiso concurred with Thando and Lerato that he also received Grade 9 mathematics question papers in Grade 10, and under the assistance of the mathematics teacher, he worked through these papers at home and after school.

The participants' feedback revealed that they were given supplementary mathematics tuition to improve their performance levels in FET mathematics. The data gathered from the participants suggest that teachers teach learners using past question papers to academically support condoned mathematics learners in the FET phase to improve their achievement levels. Knight (2010) and Mkize (2011) too are of the opinion that additional classes should consist of more mathematically focused material, and past examination papers are suitable to be used as such material.

The participants were invited to give an example of the kind of academic support they required from their school to improve their performance in mathematics in Grade 10, to which the 2016 cohort responded as follows:

We need extra classes, maybe twice a week, maybe on a Monday and Wednesday. The teacher can teach us the content we do not understand. (Thabo)

The classes should be immediately after the school day. (Thando)

Yes, we need the extra time to cover [sic] up on the work we do not understand. (Sifiso)

Maybe a maths camp; we should be able to discuss past year question papers. (Dumiani)

The responses from the 2017 cohort were as follows:

> *They should provide extra classes to teach us what we do not understand*. (Simphiwe)

> *Classes should be held immediately after school*. (Sanele)

All of the condoned mathematics learners conceded that they should receive additional contact time from their teacher to be retaught the content they had not acquired. They proposed that these extra mathematics lessons should be after school. The data further showed that condoned learners should be able to catch up on foundational knowledge needed to learn FET mathematics.

The participants disclosed that condoned learners who were promoted to the FET phase should receive extra teaching as a form of academic support on the subject content with which they struggled. This correlates with the findings of Mashau, Steyn, Van der Walt and Wolhuter (2008), Knight (2010) and Bojuwoye and Mokgadi (2014) that additional classes along with normal teaching time is an opportunity to provide learning support to condoned mathematics learners on the content in which they need reteaching. All the learners' feedback suggested that extra classes should be provided immediately after school, bi-weekly, and that it would improve the performance levels of condoned learners.

The responses from the 2016 cohort were as follows:

> *The teachers must go slow in order to help the learners. The mathematical literacy and mathematics learners must be separated so that they can receive the help they need*. (Thando)

> *Teachers need to teach differently to help us who struggle with mathematical literacy and mathematics. We all are not the same in terms of our capability in mathematical literacy*. (Lerato)

The responses from the 2017 cohort were as follows:

> *Find mathematical literacy teachers that will be patient enough to explain the work to slow learners. The teachers must not be offended when a slow learner asks them to re-explain the work again.* (Bonga)

> *The class has slow learners and fast learners. The slow learners should have their own class so that the teacher can deal with them in a way that will help them*

> *understand mathematical literacy. Now, in the school, they mix learners. You have slow learners with geniuses in mathematical literacy. The geniuses work fast. The teachers tend to go with the geniuses. Then the teacher thinks that everyone is on [sic] the same pace*. (Nothando)

Thando, Lerato and Nothando asserted that the teaching styles of the mathematics teachers should meet the learning needs of the condoned mathematics learners. The data gained from these participants further showed that differentiated classes and teaching that are solely focused on overcoming condoned learners' learning challenges would be beneficial to learning FET mathematics.

Bonga argued that FET mathematics teachers should be compassionate and cater to the needs of condoned mathematics learners in Grade 10 who are struggling with learning. This argument aligns itself with Liu and Yi-Lin's (2019) finding that the performance levels of condoned learners improve when the subject teacher is amendable to the needs of learners. The data also suggested that condoned mathematics learners should be taught separately from other mathematics learners who are performing well in mathematics. This in contrast with the learning theory of social constructivism, according to which learners with different levels of achievement learn through a process of collaborative construction of mathematical knowledge (Liu & Matthews 2005:388).

From the interviewees' responses, the data revealed that condoned learners should have their own classroom, separate from well-performing learners. This would allow the mathematics teacher to apply differentiated teaching methods to cater for contrasting mathematics capabilities. The data further revealed that differentiated teaching and lesson preparations would allow the teacher to specifically meet the academic support needs of these learners. This finding concurs with that of the DBE (2020:20) that differentiated teaching strategies should be used to address the specific performance levels of individual learners experiencing learning challenges in the subject content. Applying differentiated teaching strategies would have a positive effect on the achievement levels of condoned learners in the FET phase.

The categories that emerged for Theme 3 were as follows:

- Teachers provided past examination papers
- Additional classes should be given

- Differentiated teaching or classes are necessary

From the question "Are there any other experiences you would like to share regarding the effects of condonation on your promotion to Grade 10 and Grade 11 without being academically supported?", Theme 4, namely "Social support affects condoned learners' performance" emerged.

The 2016 and 2017 cohorts of condoned learners were requested to share their experiences of being condoned in mathematics and then promoted to the FET phase. In discussing their experiences, the following response with regard to teacher support was gained from the 2016 cohort:

> *Sir, I am scared to ask the teacher for help because teachers are judgmental, and therefore it is not easy to approach them*. (Dumisani)

The responses from the 2017 cohort were as follows:

> *The teachers do not take our concerns in class seriously because we were condoned in Grade 9. Their focus is more on the mathematics learners*. (Thabo)
>
> *The teachers need to take us seriously and make time for us and explain the content which we have failed in Grade 9*. (Lerato)
>
> *My teacher motivates us every morning to do better in school. This is what helps us a lot.* (Nothando)
>
> *I also like to add, Sir, that my teacher is patient with us compared to the teacher I had last year. She has the time for every learner so that we can achieve more marks*. (Sthembiso)
>
> *Find mathematical literacy teachers that will be patient enough to explain the work to slow learners. The teachers must not be offended when a slow learner asks them to re-explain the work again*. (Bonga)

Lerato and Thabo acknowledged that their teacher often neglected the learning challenges they faced in FET mathematics after being condoned in Grade 9 mathematics. According to the data gained, condoned learners need extra time to be retaught Grade 9 content they did not acquire.

Nothando and Stembiso argued a contrasting viewpoint to that of their peers; the data revealed that their mathematics teachers motivated them and used extra time to teach them. This finding is

shared by Cornelius-White (2007), who declares that having a mathematics teacher who shows empathy to underperforming condoned learners should improve their performance level in the FET phase.

From the interviewees' responses, the data disclosed that the quality of the teachers' social support towards condoned learners affected their achievement gains. The data also revealed that condoned learners not being constructively supported by their teachers were academically neglected in the teaching of the subject content and performed poorly. However, the data also showed that learners who were emotionally encouraged by their teachers achieved better results in mathematics. Similarly, the DBE (2014) concedes that compassionate teachers tend to have condoned learners performing better in FET mathematics. Moreover, Bofah and Ntow (2017) suggest that a strong teacher-learner relationship builds condoned learners' self-confidence in doing mathematics and so improves their achievement.

In response to the question "Are there any other experiences you would like to share regarding the effects of condonation on your promotion to Grade 10 and Garde 11 without being academically supported?", the responses from the 2016 cohort with regard to peer support were as follows:

> *Sir, we cannot afford extra classes, we try to work on our own, but most of the [sic] friends are not disciplined and then we end up not learning.* (Thabo)
>
> *My marks have improved in Grade 10 and Grade 11. I started choosing good friends. Now we are focused in school. We have formed a study group for mathematics literacy and work together*. (Sifiso)
>
> *Some people think I am a serious failure. Some of my friends did not want to chill with me anymore. I had to make new friends in Grade 11*. (Thando)
>
> *I had a different experience. My friends in the mathematics class encouraged me to do better and always stood with me. They help me out with mathematics problems which I may have. We have been friends since Grade R till today.* (Dumisani)
>
> *Yes, we've been friends for a very long time*. (Lerato)

The responses from the 2017 cohort were as follows:

I started choosing good friends. Sir, the friends I had in the past were not good for me. Now I have good friends who are focused in school. (Sthembiso)

The learners need to select good friends who are willing to work hard and pass Grade 9. (Simphiwe)

I have had good support from my friends who are doing mathematics. (Sanele)

Thabo and Simphiwe conceded that their peers did not support them in their learning mathematics, and eventually they failed FET mathematics. The data revealed that peer support had a poor effect on condoned learners achieving FET mathematics.

The other participants argued that positive peer influence could lead to condoned learners learning mathematics together, resulting in improved performance levels in FET mathematics. The data suggested that condoned learners who learnt mathematics in small groups and encouraged and supported one another could achieve better gains in FET mathematics. This outcome concurs with the finding of Alegre, Moliner, Maroto and Lorenzo-Valentin (2020) and Zeneli, Tymms and Bolden (2016) that peer tutoring, guided by a facilitator, helps condoned learners to overcome their barriers to learning mathematics.

The data showed that learners had contradicting experiences of support from their peers. Receiving constructive support from peers resulted in a positive effect on learners' achievements, while ill-disciplined peers negatively affected learners' performance in mathematics. This finding fits into the theory of social constructivism, which suggests that knowledge is constructed collaboratively by learners in a small group. Therefore, the data revealed that group dynamics in a mathematics classroom affected condoned learners' acquisition of FET mathematics.

In response to the question "Are there any other experiences you would like to share regarding the effects of condonation on your promotion to Grade 10 and Garde 11 without being academically supported?", a participant in the 2017 cohort commented as follows with regard to family support:

My marks went down in Grade 9 because of family issues because I could not study … With the support of my family and friends, I am now [Grade 11] doing better in school. Well, my dad always told me that if life takes a punch at you, you just get up and continue swinging; whatever happens, just carry on, as long as you reach the

finish line. My mum is constantly telling me to study because she knows I have a lot on my plate, emotional stuff like anxiety; I also suffer from panic attacks. (Bonga)

Bonga argued that due to a lack of parental support, he performed poorly in the senior phase. The data suggest that a lack of parental support resulted in Bonga's being condoned due to poor performance in Grade 9 mathematics.

Bonga's opposing view was that in Grade 11, his parents supported him emotionally and morally, which led to an improvement in his achievement in FET mathematics. The data revealed that parental support was crucial to good mathematics performance. The data also showed that the participant had other emotional challenges that negatively affected his FET mathematics performance.

The data suggest that a relationship exists between the achievement levels of condoned learners, the quality of social support provided by their parents and the wellbeing of learners. Other scholars, such as Letshwene (2019) and Pule (2019), are of the same view, namely that parental support is important for condoned learners who experience difficulties in learning. Parental involvement allows for emotional courage and physical support, as well as the early identification of barriers to learning. Parental support involves parents working in collaboration with mathematics teachers to assist their children in learning.

The categories that emerged for Theme 4 were as follows:

- Social support provided by teachers
- Social support provided by peers
- Social support provided by parents

The emergent themes and categories from the condoned mathematics learners' interviews are outlined in Table B.

Table 5.3: Emergent themes and categories of focus group interviews

Codes	Categories	Emergent themes
Effects of condonation and promotion on	• Condoned learners choose mathematical literacy, which is easier	The negative effects of condonation and promotion on learners' mathematics performance in the FET phase

Codes	Categories	Emergent themes
learners' performance	• Condoned learners need to be retaught the subject matter • Condoned learners struggle to achieve good levels of performance • Condoned learners are progressed after failing Grade 10	
Perceptions of condoned learners with no academic support	• Learners need academic support after condonation	Condoned learners need academic support to improve their performance levels
Strategies to support condoned learners to improve their mathematical literacy performance	• Teachers provided past examination papers • Additional classes should be given • Differentiated teaching or classes are necessary	Many support strategies exist to assist condoned learners to improve their performance levels in mathematics
	• Social support provided by teachers • Social support provided by peers • Social support provided by parents	Social support affects condoned learners' performance

5.2.3 Document analysis

Document analysis is a logical process for scrutinising printed and electronic documents that requires the data to be studied, examined and explained to gain meaning from the data (Bowen 2009:27; De Vos *et al*. 2011:377). Hence, the researcher made a study of existing documents related to the effects of condonation on the promotion of senior phase mathematics learners to the FET phase. These documents included the year-end schedules for the senior phase mathematics learners for the 2016 and 2017 cohorts. The researcher was able to identify the learners who had been condoned (learners who had been progressed to Grade 10 on 20% and 30%) in their Grade 9 mathematics by using these schedules. The researcher also tracked the academic achievement of both cohorts in the subsequent years, to the year 2019 – the same year the research was conducted.

Document analysis is used together with other data collection instruments to triangulate the data collected in an amalgamation of the procedures in a study (Denzin & Lincoln 2011:91). The data obtained from analysing the year-end schedule collaborated the feedback from the interviews with the participants.

De Vos *et al*. (2011:382) list the following advantages of documents analysis:

- Document analysis has a relatively low cost.
- Data that have been thoughtfully designed over a period can be analysed.
- Documents serve as written evidence.
- Data can be analysed at a convenient time.
- Documents bear the true confessions of participants.

The following disadvantages of document analysis are pointed out by De Vos *et al*. (2011:383):

- Preserved documents may be destroyed by natural disasters.
- Documents may not be readily available to the public.
- Some documents may be incomplete and unauthentic.
- A lack of linguistic skills may negatively influence the contents of the documents.

The researcher used document analysis in addition to semi-structured interviews and focus group interviews. An analytic comparison of the data gained from the teacher interviews, focus groups interviews and document analysis allowed the researcher to make meaning of the effects of condoned senior phase mathematics learners who had been progressed to the FET phase. The primary documents perused and analysed by the researcher included the end-of-year schedule, analyses of school results, circulars on the condonation policy and the progression policy.

5.3 Corroboration and merging of themes from the semi-structured interviews and focus group interviews

Maree (2010) attests to the fact that semi-structured interviews are often used to corroborate data that have emerged from other sources. Therefore, the data from the semi-structured interviews were used to corroborate the data gained from the three research questions posed to the focus group interviews. In other words, the data from the semi-structured interviews were used to confirm or give support to the data gained from the research questions posed to both cohorts of learners in the focus groups.

The first research question that guided the study was "How does the condonation and promotion of Grade 9 learners to Grade 10 affect their mathematics performance?"

Table 5.4: Merging of themes for Research Question 1

Codes	Categories for semi-structured interviews	Categories for focus groups interviews	Combined themes
Effects of condonation and promotion on learners' performance	• There is a lack of basic mathematics content • Learners opted for mathematical literacy over mathematics in the FET phase • Learners need to be retaught subject matter	• Condoned learners choose mathematical literacy, which is easier • Condoned learners need to be retaught the subject matter • Condoned learners struggle to achieve good levels of performance • Condoned learners are progressed after failing Grade 10	The negative effects of condonation and promotion on learners' mathematics performance in the FET phase

Table 5.4 shows the merged themes of the two different instruments for the first question. The merging of the different themes resulted in the final theme.

The specific finding (related to the objectives of the study) identified after merging the themes identified from the semi-structured interviews and focus group interviews, which were focused on answering the research questions, can be structured as follows: Condonation and promotion with no academic support have negative effects on learners' performance.

The second research question that guided the study was "What are the perceptions on condoning learners and promoting them to the FET phase without providing them with learning support?"

Table 5.5: Merging of themes for Research Question 2

Codes	Categories for semi-structured interviews	Categories for focus groups interviews	Combined themes
Perceptions of condoned learners with no academic support	• Learners should receive academic support after condonation • Without academic support, learners struggle with academic performance • With academic support, learners would improve their academic performance • Condoned learners should enrol in TVET colleges	Learners need academic support after condonation	Condoned learners need academic support to improve their performance levels in mathematics

Table 5.5 shows the merged themes of the two different instruments for Research Question 2. The merging of the different themes resulted in the final theme.

The specific finding (related to the objectives of the study) identified after merging the themes identified from the semi-structured interviews and focus group interviews, which were focused on answering the research questions, can be structured as follows: Condoned learners need academic support to improve their performance levels.

The third question that guided the study was "How can condoned learners in the FET phase be academically supported to help improve their mathematics performance?"

Table 5.6: Merging of themes for Research Question 3

Codes	Categories for semi-structured interviews	Categories for focus groups interviews	Combined themes
Strategies to support condoned learners to improve their mathematical literacy performance	• Condoned learners should attend supplementary teaching • Academic support programmes should consist of reference materials • School-level structures are not effective in providing academic support	• Teachers provided past year examination papers • Additional classes should be given • Differentiated teaching or classes	Many support strategies exist to assist condoned learners to improve their performance levels in mathematics
	Social support should be provided by parents	• Social support provided by teachers • Social support provided by peers • Social support provided by parents	Social support affects condoned learners' performance

Table 5.6 shows the merged themes for the two different instruments for Research Question 3. The merging of the different themes resulted in the final themes.

The specific finding (related to the objectives of the study) identified after merging the themes identified from the semi-structured interviews and focus group interviews, which were focused on answering the research questions, can be structured as follows: Many support strategies to assist condoned learners to improve on their performance levels.

A fourth finding emerged, which was found within the data but not related to the objectives of the study. This finding can be structured as follows: Social support affects condoned learners' performance.

5.4 Triangulation of data

Researchers can claim validity in their research when the data have been triangulated (Terre Blanche & Durrheim 2002:431). In this study, the researcher used different sources of data and various data collection methods, from which common themes emerged that contribute to the validity of the conclusions drawn from the data.

Creswell and Creswell (2018:332) explain that the process of triangulation entails the use of multiple data collection instruments for corroborating the repeated outcomes gained from the different measuring instruments. Moreover, in this study, the measuring instruments were developed for the collection of data, were informed by the literature review and were based on the objectives of the study. Therefore, the instruments meet the requirement of construct validity (see Creswell & Creswell 2018:250).

The researcher used triangulation to merge the data obtained from the three data collection instruments used, with the objective to answer the research questions. The themes identified within each measuring instrument have been tabled and discussed earlier. This was done by identifying and merging similar and popular themes from each of the three measuring instruments.

5.5 Summary

The researcher collected data from the participants and, thereafter, analysed the data using a thematic data analysis approach. After the analysis, the researcher was able to collate the themes that had emerged from the individual teacher interviews and the interviews with the two focus groups. The researcher merged the different themes that emerged into specific themes and triangulated these, as will be discussed as findings and recommendations in Chapter 6.

Chapter 6: Discussions, recommendations and conclusion of the study

6.1 Introduction

This chapter presents the discussions, recommendations and conclusion of the study which sought to identify possible effects of condonation on the promotion of senior phase mathematics learners to the FET phase. In this chapter, the researcher offers a critical discussion of the qualitative findings presented in Chapter 5 in order to answer the research questions. Data have been collected from semi-structured interviews and focus group interviews to achieve this.

This chapter is divided into themed sections. It starts with a discussion of the negative effects of condonation and promotion on learners' mathematics performance in the FET phase and the finding that condoned learners need academic support to improve their performance levels in mathematics. This is followed by a discussion of the support strategies to assist condoned learners to improve their performance levels in mathematics and the finding that social support affects condoned learners' performance. These four themes have been formulated around the research questions guiding the study and have constantly been used for organising Chapters 2, 3, 4 and 5 of the study.

Also included in the chapter are important recommendations related to the effects of condoning senior phase mathematics learners and promoting them to the FET phase without providing them with academic support. The outcomes of the investigation are clarified in this chapter. The researcher further outlines the limitations of the study and how these could be overcome in future research endeavours.

6.2 The findings of the study

The main findings of this research are based on the overall objectives of the study, namely the effects of condonation on the promotion of senior phase mathematics learners to the FET phase. The following research questions guided the study:

- How does the condonation and promotion of Grade 9 learners to Grade 10 affect their mathematics performance?
- What are the perceptions on condoning learners and promoting them to the FET phase without providing them with learning support?

- How can condoned learners in the FET phase be academically supported to improve their mathematics performance?

The findings based on the three research questions are discussed next.

6.2.1 Research Question 1: How does the condonation and promotion of Grade 9 learners to Grade 10 affect their mathematics performance?

In response to the first research question, findings suggest that the condonation and promotion of Grade 9 learners to Grade 10 negatively affect their mathematics performance in the FET phase. The findings include that these learners lack basic mathematics content and, therefore, need to be retaught the subject matter. Furthermore, it has been found that learners opt for mathematical literacy instead of mathematics.

The outcome of the study suggests that condoned mathematics learners lack some of the basic mathematics content from the previous grade. Condoned learners struggle with the basics in the subject matter, as they have been promoted to higher grades. Basic mathematical knowledge is the foundation on which new knowledge is built, and this is closely aligned with the principle of social constructivism. Social constructivism is based on the belief that learners gain new meaning from building knowledge on their pre-existing knowledge (Fosnot 1989:12).

The condonation and promotion of senior phase mathematics learners to the FET phase result in their not mastering all the subject content (Letshwene 2019:42). The poor performance of condoned mathematics learners shows that they have entered successive grades without having gathered knowledge from the previous grades (Umalusi 2015:45). The poor performance of condoned mathematics learners in the FET phase is likely due to gaps in knowledge they have accumulated as they moved from grade to grade without mastering basic skills and knowledge (Legotlo *et al*. 2002:117). Condoned learners find themselves struggling with FET mathematics because they carry deficits in knowledge from the previous grades.

Without acquiring foundational knowledge in mathematics, condoned learners struggle to achieve good levels of performance. Umalusi (2015:42) acknowledges that this continuous decline in percentage marks in condoned learners' performance as they move to higher grades is a huge concern. The decline in learners' marks in mathematics can be attributed to promoting learners to

new grades with gaps in knowledge accumulating from the earlier grades (Umalusi 2015:45). According to the social constructivist learning theory, condoned learners require prior knowledge as the foundation to build new mathematical knowledge (Fosnot 1989:13). Therefore, meaningful learning in mathematics can only happen by scaffolding new knowledge on the basis of existing knowledge.

Learners may lack basic mathematical content when they are progressed to Grade 11, as they did not acquire foundational knowledge in Grade 10 but were pushed into Grade 11. Reddy and Nair (2015) point out that assisting learners to progress from grade-to-grade results in accumulated learning deficits, which are evident from Grade 10 up to Grade 12. These learners may struggle with acquiring new content throughout the year because they lack the grounding knowledge from Grade 9. Eventually, they may fail the subject, drop out of school or drop mathematics in favour of mathematical literacy.

The findings relate to the need for condoned learners to be retaught the subject matter in mathematics. The deficits in mathematical knowledge accumulated by condoned learners show that they may need to be retaught the basic subject matter to equip themselves to learn new content. Sundai and Sheriff (2015) postulate that when learners do not perform well in the foundation and senior phases, it affects their mastery of the subject matter in the FET phase. Since mathematics is hierarchical, learners need to master the Grade 9 foundational knowledge, and only then are they equipped to learn the new content (DBE 2010:12). This is reflected in the social constructivist learning environment, where learners build new knowledge through the process of scaffolding instructions (Alanazi 2019:3).

Underperforming learners must be retaught foundational knowledge through supplementary class instructions and extra learning opportunities in mathematics (Bojuwoye & Mokgadi 2014:8). Reteaching is a strategy to teach mathematics that involves the teacher repeating, rephrasing and paraphrasing the content with which learners are struggling (Moore 2005:11). During the normal teaching time, condoned learners are engaged with the Grade 10 content; therefore, there is very little or no time for the teacher to reteach Grade 9 subject matter. Hence, an academic support programme can only be provided to learners outside the normal teaching lesson, either by extending the school day or by giving extra classes over the weekends and school holidays. Only when condoned mathematics learners have mastered the foundational knowledge in mathematics

will their performance levels in Grade 10 improve, because mathematics is hierarchical (DBE 2010:12).

The findings suggest that condoned mathematics learners struggle to pass mathematics in Grade 10 and then opt for mathematical literacy, which is easier. This correlates with the *NSC Examination Report* (2019), which shows a gradual decline in the number of learners enrolling for mathematics from 2018 to 2019 as opposed to an increased number of learners enrolling for mathematical literacy at Grade 12 level (DBE 2020:54). Umalusi (2015) confirms the reason for this – condoned senior phase learners struggle with poor performance in FET mathematics and therefore choose the easier mathematical literacy over mathematics. This shows that there is a steady increase in the number of enrolments for mathematical literacy over mathematical literacy because condoned senior phase mathematics learners struggle to perform well in Grade 10.

6.2.2 Research Question 2: What are the perceptions on condoning learners and promoting them to the FET phase without providing them with learning support?

In response to the second research question, findings suggest that condoned senior phase mathematics learners require an academic support programme to master the foundational knowledge so that their FET mathematics achievement levels can improve. According to Mashau *et al*. (2008), learning support strategies comprise assisting learners to work in groups, supplementary, remedial or extra classes and curriculum advice and mentoring. These are additional opportunities for condoned mathematics learners to engage with the foundational knowledge they did not acquire in the senior phase.

Learners may require academic support to assist them in overcoming their barriers to learning. Such academic support strategies are used to improve the achievement gains of underperforming learners. These strategies vary from tutoring individual learners to before- and after-school programmes allowing for supplementary support for homework and smaller classes for personalised teaching and learning (Peterson *et al.* 2014:2). Group work activities comprising peer tutoring in smaller groups of learners are technically aligned to the social constructivist theory. In a social constructivist classroom, learners collaboratively exchange information, which leads to more success in learning the subject content (Amineh & Asl 2015:13).

The findings show that without academic support, condoned learners may struggle to achieve good performance in FET mathematics. Reddy and Nair (2015) point out that condoning learners results in their accumulating learning deficit gaps, which emerge between Grade 10 and 12. This suggests that senior phase mathematics learners struggle to reach good achievement levels in FET mathematics because they have been condoned in the lower grades.

Furthermore, the findings reveal that an academic support programme may assist learners in acquiring foundational knowledge and, consequently, improve their achievement levels in FET mathematics. Condoned learners may undergo reteaching of the foundational knowledge through supplementary teaching opportunities. Academic support can be provided to condoned learners to overcome their barriers to learning mathematics (DBE 2014:13). Such support varies from curriculum differentiation and assessment modification to providing specialist support material to both learners and teachers (DBE 2014:x). Mavuso (2014) explains that support can be provided to condoned learners who experience learning difficulties by means of intervention programmes that comprise curriculum differentiation and adaptation. Providing condoned learners with such support may lead to improved learner performance in mathematics.

The mathematics teacher should be responsible for creating an academic support programme to condoned mathematics learners by consulting with parents in developing the ISP to specifically address the learning needs of each learner. The objective of learning support intervention programmes is to increase the instructional time for learners who are struggling academically (DBE 2020:20). During this time, the subject teacher may use different academic support strategies to close the gaps in knowledge condoned learners have accumulated in the senior phase. Therefore, mathematics teachers may pre-plan educational lessons within the achievable objectives of a lesson. This articulates well with the notion that in a social constructivist learning environment, learning activities allow for collaborative learning in smaller groups (Pritchard & Woollard 2010:28).

An academic support programme would probably contribute to an improvement in learners' level of performance in mathematics. To prevent condoned learners from failing, academic support should be provided to underperforming learners by means of remedial support, additional classes and supplementary schoolwork (Knight 2010:176).

The findings suggest that the condonation of senior phase mathematics learners and promoting them to the FET phase may have resulted in a high number of learners dropping out of school, especially from Grade 10 onwards. This seems to relate to the trends in education that the number of learners who drop out of school after Grade 9 before entering Grade 12 is as much as 40%, while the completion rate of FET learners reached the 50% level by 2015 (Equal Education 2015:10; Umalusi 2015:23). Many learners eventually drop out of school in Grades 10 and 11 before reaching Grade 12 as a result of repeatedly failing (DBE 2010:44).

The findings claim that condoned learners who repeatedly fail should explore TVET colleges as an option to study further. *News24* (2018) has reported that TVET colleges are available alternatives for learners who did not complete their NSC or who dropped out of school to complete their studies. Learners may enrol at TVET colleges with Grade 10 to pursue their studies instead of remaining in school and becoming frustrated with repeatedly failing mathematics. Many do not have an alternative to studying and eventually leave school or fail, resulting in a waste of resources (Kader 2012:2). Condoned learners who continue to perform poorly in the FET phase eventually lead to huge numbers of learners dropping out of school in Grade 10, before completing Grade 12.

6.2.3 Research Question 3: How can condoned learners in the FET phase be academically supported to help improve their mathematics performance?

The findings suggest that extra tuition was given to condoned mathematics learners and supplemented with other academic support strategies. An ISP provides learning support to learners who struggle with learning the subject content, either through additional support strategies or expanded opportunities for classroom learning (DBE 2014:5). Learners should attend additional classes to undergo an academic support programme for mathematics. The SIAS policy (DBE 2014:8) provides the framework for constructing an academic support programme. The policy advocates that learning support must be given to learners in their present school to overcome their barriers to learning and development (DBE 2014: ix). The ISP also includes differentiation of the subject content, a change in classroom methodologies and a modification in assessment to accommodate learners with barriers to learning and development (DBE 2010:21).

Extra classes can be conducted by mathematics teachers outside normal teaching time, allowing condoned learners to receive supplementary learning support on concepts with which they are

struggling in mathematics. Peterson *et al.* (2014) postulate that after-school programmes have a strong positive effect on teaching and learning. These classes are usually attended by condoned learners and are occupied with learning either before or after school hours; therefore, they do not infringe on normal teaching time. Additional mathematics classes opportune the social constructivist teacher to place the learners at the centre of knowledge construction by posing questions on the mathematical content they find challenging (Kroflič 2019:61).

Knight (2010) recommends extra classes to learners who have failed a grade. Academic support during extra classes includes remedial support, providing additional classes on a weekly basis or during holidays and providing learners with additional learning resources (Knight 2010:176). These are expanded opportunities created by the subject teacher to expose condoned learners to the subject content they struggle with. Mkize (2011) is of the view that subject teachers can provide individualised and more focus-orientated academic support on the mathematical concepts condoned learners find difficult, thereby assisting them to improve their performance level.

Supplementary classes can be held either before the school day starts or after school hours to provide condoned learners with additional teaching and learning opportunities (DBE 2020:21). The subject teacher should ensure that the supplementary classes meet the teaching and learning needs of learners so that their barriers to learning mathematics are bridged (DBE 2014:7). Mashau *et al*. (2008) mention that learning support strategies such as extra classroom instructions, supplemented by remedial classes, academic teaching and group work, can assist learners to overcome barriers to learning mathematics.

Kader's (2012:171) study focused on the learning challenges experienced by Grade 10 learners and recommended that schools provide extra classes so that learners could improve on their scholastic achievements. During additional classes, learners receive supplementary notes and additional teaching and learning on mathematical concepts (Bojuwoye & Mokgadi 2014:8). Supplementary tuition time with the subject teacher can also allow learners added time to complete their mathematics classwork under the supervision of the subject teacher (DBE 2010:91).

The findings suggest that exposing condoned learners to previous examination papers helps them improve their performance level in FET mathematics. This is the same academic support strategy that was applied for the Grade 12 learners of 2019, which included providing additional teaching

material consisting of past examination papers and after-school programmes (DBE 2020:19). Moreover, these were supplemented with differentiated teaching programmes, lesson adaptations and differentiated grouping and modification of teaching methodologies (DBE 2020:20).

Mavuso (2014) mentions that expanded opportunities are related to homework given to learners. Homework is an academic support strategy that is used to teach mathematics to learners who experience difficulties (Moore-Harris 2005:17). Homework may create an opportunity for learners to practise mathematical problems, such as word problems in past examination papers (Letshwene 2019:72). Therefore, giving learners previous examination papers for homework allows them to engage with the subject matter on their own.

After a teacher has identified a learner's area of weakness, based on the corrections done on homework, the teacher is able to provide the appropriate academic support, either by reteaching or varying the teaching methodology (Oktavianty *et al*. 2018:5). This may enable struggling learners to master the mathematical concepts they find challenging. Hence, this form of academic support strategy can be used to improve learners' performance.

The findings concur that condoned mathematics learners should have their own mathematics classroom and be retaught foundational knowledge. This finding is aligned to the theory of social constructivism, which advocates that mathematics learners being involved in interactive group work and problem-solving situations constitutes meaningful learning (Amineh & Asl 2015:14; Bay *et al.* 2012:344)

The learning needs of condoned learners can be specifically catered to in differentiated classes by using differentiated teaching methodologies and practices. Curriculum differentiation includes differentiation of the subject matter, adaptation of teaching methodologies and adjustment in assessment regimes (DBE 2014:45). Differentiation of teaching the school curriculum is another strategy the subject teacher may use on underperforming learners in mathematics to possibly raise their level of performance.

The guidelines on inclusive teaching and learning define curriculum differentiation as a process of adapting the subject matter to meet the learning abilities of underperforming learners (DBE 2010:6). This is the view of social constructivism too, namely that curriculum delivery must meet the learning needs of learners at their various levels of poor performance (Alanazi 2019:4). For

example, the same activity can be taught to a class with learners who have diverse learning needs by customising the content and teaching methodologies, while also assessing differently to meet their varying needs (DBE 2020:20).

The findings of the study suggest that curriculum delivery may be differentiated in terms of content level, teaching methodology, assessment and learning environment to cater for the individual needs of condoned learners in the FET phase (DBE 2014: viii). In other words, the mathematics teacher can use differentiated instructions for individual learners performing at their own academic levels so that all the learners are included in the teaching and learning (Waldron & McLeskey 2001:175). Alanazi (2019) explains that curriculum delivery being influenced by social constructivism means that the curriculum must be varied in delivery to meet the contrasting needs and abilities of condoned learners in FET mathematics. Teachers using the differentiated approach to academically support condoned learners aim to assist them to improve their performance (DBE 2020:20).

6.2.4 Social support affects condoned learners' performance in mathematics

There is a universal belief that learners who are struggling to meet the pass requirements in a subject or grade need to be supported collectively by their teachers, parents and peers, also known as social support. Shumaker and Brownell (1984:11) describe social support as "an exchange of resources between two individuals perceived by the provider or the recipient to be intended to enhance the well-being of the recipient". Social support is defined as receiving care from one's teachers, caregivers and peers (Saylor & Leach 2009:71).

Liu and Yi-Lin (2019:16) reveal that learners who receive social support from teachers, parents and peers obtain noticeably higher results in mathematics than learners where social support is absent. This correlates with the findings of the study, namely that social support affects learners' performance levels in mathematics in the FET phase. The focus of social support is on the academic support provided by the social partners (i.e., teachers, parents and peers) to condoned learners. This support affects condoned learners' achievement in mathematics in the FET phase. Social support provided by the three social partners respectively is discussed next.

6.2.4.1 Social support provided by teachers

The findings show that constructive teacher support to condoned learners' results in a positive effect on their performance level in FET mathematics. A constructive teacher actively facilitates the lesson and allows the learners to arrive at their own collaborative group solutions (Doolittle 1999:8). This corroborates the theory of social constructivism – the teacher is seen as a facilitator of the learning content, mediating the learning experience to learners or scaffolding the concepts to learners represented in authentic scenarios (Amineh & Asl 2015:9; Bay *et al.* 2012:344).

Studies by Stake (2006) and Strayhorn (2010) have shown that receiving social support from teachers determine learners' academic self-beliefs and attitudes towards mathematics, which positively affects their performance levels. In other words, mathematics teachers should have a vested interest in their learners' performance and assure them they are worthy of passing and encourage them to perform better. Subject teachers should also have a positive attitude towards underperforming learners to meet their academic needs to achieve better results (DBE 2014:34).

A strong teacher-learner relationship may help build learners' self-confidence in the subject matter, resulting in learners being more likely to succeed in producing better academic results (Bofah & Ntow 2017:54). A change in attitude, behaviour, teaching method, curriculum and environment is recommended to meet the needs of all learners condoned in senior phase mathematics going into the FET phase. A strong teacher-learner relationship is also displayed by teachers' understanding and implementation of the mathematics curriculum and support strategies, the expectations they have and their ability to inspire their learners to achieve better results (Badri *et al*. 2017:32). This concurs with the ideology of social constructivism, namely that learners in smaller groups collaboratively build knowledge by engaging in questions and answers mediated by various strategies adopted by the teacher (Jin *et al.* 2020:8).

The findings disclose that positive care and support displayed by mathematics teachers may result in an improvement in their achievement levels in FET mathematics. It is, furthermore, shown that the learner-teacher relationship largely influences learners' performance in FET mathematics. Motschnig-Pitrik (2004) and Marzano (2003) assert that productive and positive learner-teacher relationships are important in encouraging academic achievement. Therefore, an empathic mathematics teacher, with a positive attitude towards condoned learners, using differentiated

teaching methodologies, should see an improvement in these learners' performance in FET mathematics. This entails making learning support resources accessible to condoned learners while also modifying assessment tasks to meet the diverse needs of these learners so that they can reach their full potential (DBE 2014:33).

The subject teacher is most likely responsible for the design and implementation of a learning support programme for condoned learners who need to undergo training to improve their performance level. This learning support is encapsulated in the ISP (DBE 2014: iix). Moreover, teachers can have learner-centred activities in the classroom with supplementary support materials, give learners homework and provide additional lessons to learners who are struggling with learning. The role of a social constructivist mathematics teacher has been transformed into one of a facilitator in the classroom. Abdulkarim (2016) affirms that a facilitator guides the activities in a learning programme for condoned learners in the quest for knowledge acquisition.

Amineh and Asl (2015) and Bay *et al*. (2012) hypothesise that a social constructivist mathematics teacher actively facilitates the construction of learning among condoned learners by mediating the learning experience. In other words, the teacher may pose mathematics questions to trigger their thinking, thereby allowing interaction among learners in a group, where the outcome should be actual learning. Under the facilitation of the mathematics teacher, condoned learners could be allowed to conclude their own answers in the mathematics class.

6.2.4.2 Social support provided by peers

The findings suggest that, in the learning of mathematics, peer support affects learning in the FET phase and, consequently, the achievement levels of learners. Furthermore, poor peer support negatively affects learners' performance levels, while positive peer support translates into improved achievement in FET mathematics. This correlates with studies that have shown that reciprocal peer tutoring may be advantageous to learners learning mathematical concepts (Alegre *et al.* 2020:1; Zeneli *et al.* 2016:3). Alanzi (2016) postulates that social knowledge construction among condoned mathematics learners leads to gains because learning is centred on peer tutoring under the supervision of a knowledgeable teacher.

According to the findings, peer-group study groups, formulated by learners with the objective of collaborative learning, benefit their performance levels in FET mathematics. These findings are

shared by Alegre, Moliner, Maroto and Lorenzo-Valentin (2019), who proposed peer tutoring as an alternative to traditional classroom practices, placing emphasis on reciprocal interaction among mathematics learners and knowledge construction while the teacher facilitates. Peer tutoring may assist condoned learners experiencing learning difficulties in FET mathematics and mathematical literacy because of their lack of foundational knowledge. Abdulkarim (2016) reports that teachers use group work in mathematics lessons, enabling learners to socially interact and build new knowledge. Pritchard and Woollard (2010) put forward that in a social constructivist environment, collaborative group work enables condoned learners to learn better, which may lead to improved results.

The social construction of knowledge in an interactive mathematics classroom aligns itself with the social constructivist approach to teaching and learning. Social constructivism, as a theoretical perspective, postulates that knowledge construction arises from social interaction among a group of individuals similar in nature through their language, facilitated by the teacher (Doolittle 2014:486). Liu and Matthews (2005) indicate that learning is centred around active learners within a group, communally interrogating the mathematical content with questions. Condoned learners who work through mathematical questions in small groups, exchanging verbal information to reach a mutually agreed solution, may lead to constructive learning in the FET phase.

In group work, the learning processes are complementary, whereby the more knowledgeable learners teach other learners under the guidance of the mathematics teacher. Group work is mutually beneficial, as the fast learners master the content by explaining the content to the slow learners, while the slow learners achieve better learning outcomes from their peers (Abdulkarim 2016:2). Consequently, learning in a mathematics environment is active and fosters an equal participatory act by all of the learners (Alegre *et al.* 2020:3).

Group work activities for condoned learners can include learning strategies such as posing questions related to mathematics, providing feedback and assistance on knowledge formation and reinforcing the content by providing answers to questions (Alegre *et al.* 2020:3). Also, in group dynamics, condoned learners in need of additional academic support may benefit from other peer-tutoring strategies such as the repetition of concepts and opportunities to clarify answers (Bowman-Perrott, Burke, Zhang & Zaini 2014:50). Some evidence suggests that learners probably

gain more learning from their peers than from the mathematics teacher (Bowman-Perrott *et al*. 2014:49).

According to Bojuwoye and Mokgadi (2014:11), learners tutoring their peers in the classroom may result in an improvement in condoned mathematics learners' performance levels. Palincsar (1998) also points out that as knowledge is socially constructed, collaborative peer learning sessions in mathematics may lead to improved learning and performance by condoned learners.

6.2.4.3 Social support provided by parents

The findings unanimously show that providing parental involvement and support to condoned senior mathematics learners results in an improvement in their FET mathematics achievement levels. According to these findings, parental involvement is a crucial support strategy in improving condoned learners' performance levels in FET mathematics. Chao (2000) and Wong-Lo and Gabriel (2013) concur that personal parental involvement and guidance, as well as a supportive home environment with resources, positively affect learners' academic performance in school. Hence, it stands to reason that the parent component in social support plays an important role in assisting condoned mathematics learners to achieve better in the FET phase. This means that parents have specific responsibilities that they need to fulfil towards their children's academic performance, which should result in an increase in their performance levels.

Letshwene (2019) and Pule (2019) suggest that the most successful strategy to increase learner achievement in school is to consult with parents. So, for parents to be informed of their children's level of progress and the extent of the academic support that is needed, it is incumbent upon parents to maintain regular contact with the mathematics teacher. Accordingly, parents and teachers need to collaborate in the design and implementation of the ISP.

Furthermore, the findings show that parental involvement in supporting the learning support strategies learners undergo is an extension of the classroom, and parents may provide feedback on their children's progress. This finding is supported by the parent's role in the ISP, namely to identify the learning challenges children may have at home, which can be addressed by the mathematics teacher at school (DBE 2014:35). Dagar and Yada (2016) put forward that learning in a social constructivist environment is possible when it is facilitated by a more knowledgeable other. In this case, the parent is the more knowledgeable other at home. Therefore, these support

strategies condoned learners are tasked with may be extended to the home, and parents can further facilitate the knowledge construction that has been initiated by the mathematics teacher.

Parents may, under the guidance of the subject teacher, seek extra tuition, supplementary learning material or other educational support services to assist their condoned children in mathematics to re-enforce teaching and learning. In doing so, parents should communicate with the subject teacher about strategies through which they may support their children at home. This should guide parents in assisting learners to complete learning support tasks, which is an extension of classroom learning and teaching (The Presidency 2011:101).

Parents should be actively interested in their children's progress to give their children a sense of security and worth to strive to do their best in order to improve their performance in mathematics. Badri (2017) and Jeynes (2007) claim that parental involvement significantly influences learners' performance levels in mathematics and science. This may result in condoned learners internalising the very same significance their parents attribute to mathematics, which would result in their striving towards improving their performance levels. Therefore, condoned learners who have been promoted to the FET phase and still perform poorly in mathematics may need parental support. This support strategy can be an integral component in a strategised learning support programme designed to assist learners in improving their performance levels in the FET phase.

6.3 Implications of the study

The findings of the study reveal the negative effects of condonation on the promotion of senior phase mathematics learners to the FET phase. These findings have significant implications for senior phase mathematics learners with regard to the implementation of the condonation policy.

The condonation of senior phase mathematics learners without the required foundational knowledge results in a high failure rate in mathematics in the FET phase leading up to the NSC. Poor performance in mathematics eventually leads to condoned learners struggling to pass and eventually dropping out of school before reaching Grade 12. These individuals are unable to further their studies at any tertiary institution. Eventually, they enter the job market as unemployable candidates. Sooner or later, these unemployed youths may become a burden on the South African economy because they require social support and health care. Hence, there is a need to address the challenges of condoning senior phase learners and promoting them to the FET phase.

Another negative effect of condonation is FET learners choosing mathematical literacy instead of mathematics. This limits the pool of NSC graduates who are able to further their studies in the science fields, which may lead to a reduced number of practitioners of scarce skills in the science fields in South Africa. Again, this would have a negative impact on the economy of South Africa, as these scarce skills practitioners would have to be "imported" at a huge cost to fulfil the void in the economy. Therefore, the condonation and promotion of senior phase mathematics into the FET phase need to be addressed.

High schools are responsible for condoning senior phase mathematics learners and promoting them to the FET phase. Mathematics teachers have no other choice but to contend with the effects of condoned learners taking mathematics in the FET phase. Also, the findings show that they are mostly responsible for providing academic support to condoned learners, while school management teams focus on academic support for Grade 12 learners. The DBE, together with the school management team, needs to focus on providing academic support to condoned learners from Grade 10 to Grade 12. This may lead to an improvement in learners' performance in the NSC, a reduction in the drop-out rate and an increase in the number of candidates who are eligible to enrol at tertiary intuitions to study in the science field.

6.4 Recommendations of the study

This section provides a layout of the recommendations to policymakers and school management teams that may positively influence condoned learners' performance in mathematics in the FET phase. Through pragmatic mechanisms, the findings of the study recommend actions to be taken to address the effects of condonation on the promotion of senior phase mathematics learners to the FET phase.

- Condoned mathematics learners in the FET phase should undergo an academic support programme consisting of learning support strategies to acquire the foundational knowledge in mathematics needed to perform well in FET mathematics. These learning support strategies are supplemental to the ordinary school day attended by condoned learners and should be in the form of extra classes conducted before or after the normal school day. It is also recommended to have holiday classes and after-school programmes on the weekends. During these supplemental contact times, condoned learners should be retaught

the foundational knowledge in mathematics they had missed out on because of condonation.

- Reteaching provides mathematics teachers to re-expose condoned senior phase learners to foundational knowledge in a variety of coherent ways. The SBST should play an integral role in coordinating the learning support programme for every condoned learner who is in need of academic support. This support team needs to function effectively so that the educational needs of condoned learners are monitored and addressed in the FET phase.
- The SBST should ensure that all condoned mathematics learners who are in need of academic support have a formulated ISP. Accordingly, the teacher should develop an ISP for every condoned learner experiencing learning challenges in FET mathematics. The ISP should position the learner at the centre of the learning and teaching activities and may be supported by different complementary learning support strategies to specifically reteach the foundational knowledge condoned learners need for FET mathematics. To do this, the mathematics teacher first needs to screen, identify, assess and then provide learning support strategies to directly meet the needs of condoned mathematics learners in the FET phase. These complementary strategies should include inclusive education and the adaptation of lesson plans and the learning environment. Other implementable strategies include providing supplementary teaching material, applying differentiated or peer groupings and modifying teaching methods and lesson delivery. The mathematics teacher will also need to assess how effective these learning support strategies are by setting short tests and providing immediate feedback to the condoned learners.
- Mathematics teachers should implement inclusive teaching and learning, which advocate those condoned learners experiencing learning challenges in mathematics should be catered for in the classroom. Hence, mathematics teachers may vary their teaching methodologies and lesson presentations to meet the learning needs of condoned learners. The emphasis is on including condoned learners with learning challenges in the normal mathematics classroom with other learners who are performing well in FET mathematics.
- In the adaptation of lesson plans, the mathematics teacher should use past examination papers to pre-expose learners to examination-type questions in preparation for authentic examinations. The mathematics teacher should target level 1 and level 2 questions, which make up almost 60% of the question paper. Sufficient mastery of these questions should

enable condoned learners to achieve a pass level in FET mathematics. Therefore, the mathematics teacher needs to adapt the learning environment to meet the needs of condoned learners by, for instance, grouping learners according to similar or varying abilities. The teacher should apply remedial teaching and create group work activities for each group so that they can peer tutor one another to overcome their barriers to learning mathematics and to master the level 1 and level 2 questions.

- Peer tutoring should be implemented in the mathematics classroom and should lead to more knowledgeable learners assisting their peers who are struggling with learning, while the teacher mediates. This creates the opportunity for the tutor to practise mathematical applications while others in the group are being retaught. Peer tutoring is focused on learner-centred activities within a group, collectively probing the learning content with questions and learning from one another under the guidance of the teacher. This translates into condoned learners working together and exchanging verbal information to reach a commonly agreed-upon solution, facilitated by the mathematics teacher.
- Mathematics teachers should at all times have a positive attitude towards underperforming learners. They should have an interest in the performance of condoned learners in the FET phase, show empathy and positively encourage poorly performing learners to strive for better results and show they are worthy of passing. Furthermore, mathematics teachers should foster a strong relationship with their learners, which may help to build their self-confidence in mathematics. To develop a strong relationship with condoned learners, teachers should implement suitable academic support strategies to assist learners to overcome their barriers to learning mathematics in the FET phase. This should be demonstrated in their approach to lesson presentation and differentiation, as well as their understanding of the learning content. Teachers should set realistic and achievable goals for condoned learners. As much as these goals depend on each learner's unique abilities, they should be inspired to do better academically.
- The teacher should be more of a facilitator in the learning activities than a traditional teacher. In other words, the teacher should pose probing questions, lead the group of mathematics learners to collaboratively discover the learning content and, where necessary, guide them to the correct answers. The teacher as a facilitator mediates the learning

experience of condoned learners, thereby enabling them to deduce their own answers in the mathematics class.

- Parents should be directly involved in their children's progress and the extent of academic support needed. This means that parents and mathematics teachers should cooperate with one another to support condoned learners who struggle with learning. The parent should report back to the mathematics teacher on the challenges the condoned learner experiences at home while engaging with mathematics homework. Moreover, providing learning material to learners as homework should benefit them in their FET mathematics performance. The results of condoned senior phase learners' homework should provide mathematics teachers with feedback on how well they have grasped the learning content and whether there is a need to adapt the new lesson presentation. This should lead to an improvement in learner performance in mathematics.
- Parents may, under the advisement of the mathematics subject teacher, take their children for extra mathematics tuition, purchase supplementary learning material or consult other educational support services deemed fit to assist. Furthermore, parents showing a positive insight into their children's progress in mathematics may give them a sense of worth and should encourage them to perform better. Lastly, parents' attitudes towards the learning of mathematics may be reflected onto their children; consequently, the way learners perceive the need to perform well in mathematics is through the eyes of their parents.

6.5 Limitations of the study

The first limitation experienced by the researcher was that the research was conducted at a single combined school in the Newcastle circuit. There are four other circuits that, together with the Newcastle circuit, constitute the Amajuba district, and each circuit has its own number of schools. Therefore, the study is not representative of the other circuits, and the findings of the study cannot be used to generalise what is happening in the entire Amajuba district.

The second limitation was the sample size of learners, which consisted of learners who remained in school after being condoned and then progressed. Learners who had exited Grade 10 after being condoned in Grade 9 mathematics were not available for the interviews. A bigger sample group consisting of learners who were condoned and then exited school before completing Grade 12 would have increased the body of knowledge on the topic.

6.6 Overcoming the limitations

In order to overcome the first limitation, it is recommended that further studies be extended to include high schools in the four other circuits that constitute the Amajuba district. Such a study would be representative of all the circuits in the Amajuba district, and therefore, the findings may be used to generalise the effects of condoning learners in mathematics in the whole district.

To overcome the limitation in terms of the sample size of learners, further studies should include learners in focus group interviews who had exited school in Grade 10 or Grade 11 after being condoned in Grade 9 mathematics. Including these learners would increase the body of knowledge on the effects of the condonation of senior phase mathematics learners.

6.7 Conclusion of the study

The outcome of the study specifically relates to the aims and objectives of the research undertaken. The study identified the following themes: negative effects of condonation on learners' mathematics performance in the FET phase; condoned learners need academic support to improve their performance levels in mathematics; many support strategies exist to assist condoned learners to improve their mathematics performance; and social support affects condoned learners' performance.

The study supplements the body of knowledge on the effects of the condonation of senior phase mathematics learners and promoting them to the FET phase. The researcher recommends that the scope of the study should be extended to include the circuits in the Amajuba district as well as learners who were condoned in mathematics, promoted to Grade 10 and then exited the school system. Based on these provisos, the results of the new study could be generalised for the Amajuba district. The results could be then used to guide mathematics teachers on providing academic support to condoned Grade 9 learners who enter Grade 10. This may result in condoned senior phase learners improving their performance in FET mathematics.

The study will broaden all stakeholders' knowledge and understanding of curriculum factors that affect learner performance and enlighten them on how these curriculum factors are interdependent on one another.

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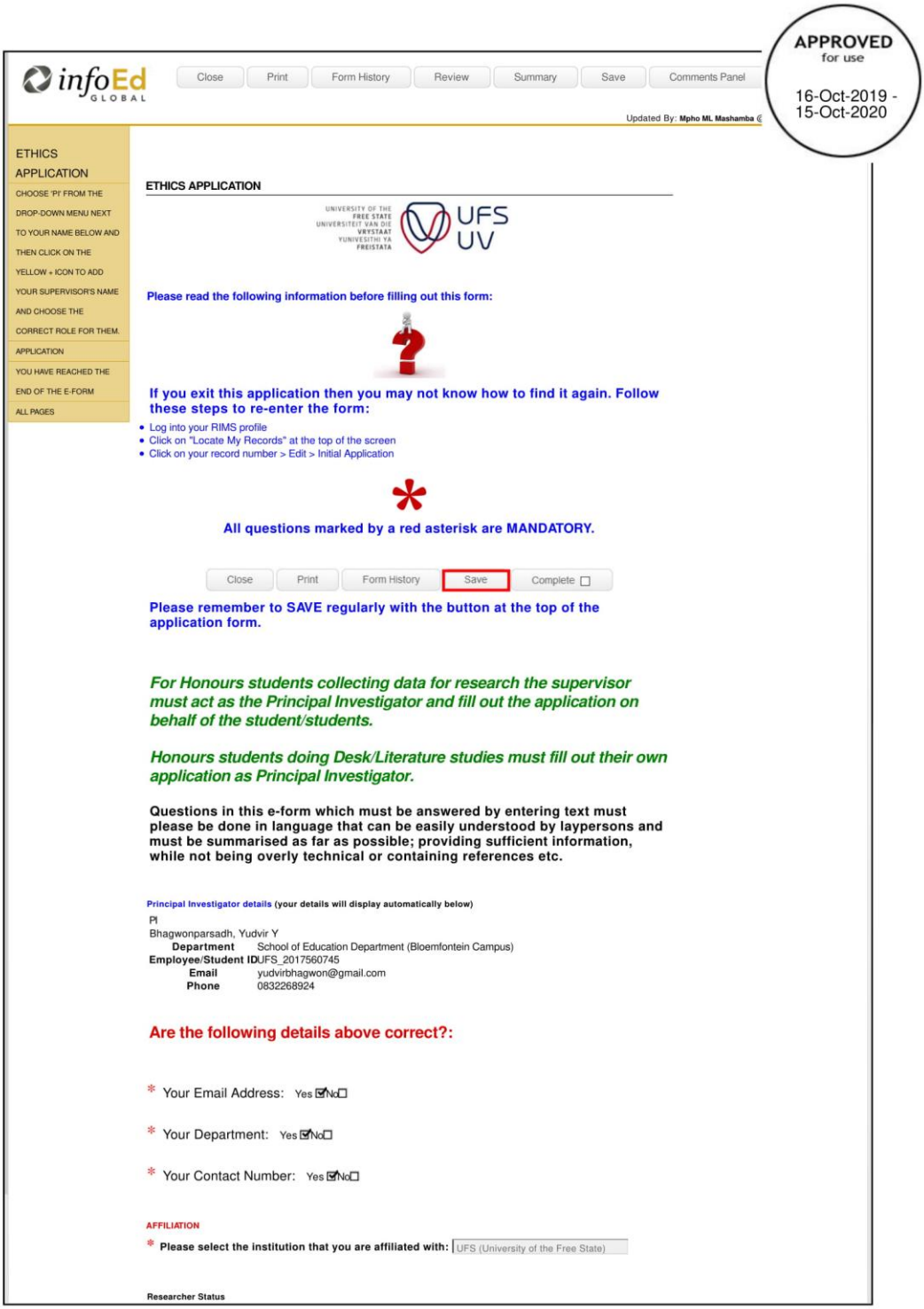
Appendices

Appendix A: Ethics application



* What is your Academic Status? Select from the list: Master Student

* Do you have a Supervisor / Study Leader for this study? Yes ☑ No ☐

Submission Type

* **Select the applicable research field / submission type. (Click on the drop-down menu and select from list)**: Education Research

* **Select: This is an application for:** Research Project and/or Data Collection for research

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CHOOSE 'PI' FROM THE DROP-DOWN MENU NEXT TO YOUR NAME BELOW AND THEN CLICK ON THE YELLOW + ICON TO ADD YOUR SUPERVISOR'S NAME AND CHOOSE THE CORRECT ROLE FOR THEM.

* Name	* Role
Bhagwonparsadh, Yudvir Y	PI
* Name	* Role
Rabaza, Msebenzi M	Supervisor / Study Leader

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APPLICATION

Guidelines

Please familiarise yourself with the Guidelines by clicking on this purple link: Ethics Clearance Guidelines

Please read the Ethics Clearance Guidelines for Researchers before completing this application. Complete all sections and attach all neccessary documents as indicated - incomplete applications will not be reviewed and may delay the approval process. Please feel free to contact the Faculty Coordinator/RIMS office listed below for more information or further assistance and advice in this regard.

Beverley Wilcock, Email: wilcockb@ufs.ac.za, Tel: +27(0)51 401 2029

Project Details

Project Title
The effects of condonation on the promotion of senior phase mathematics learners into the FET phase.

Researchers are required to submit all research applications for REC approval before commencement of research. Ethics approval is given to project proposals for a period of a year, after which the PI must submit a continuation review report.

* Estimated data collection time (e.g. 1 Year, 3 months etc). Explain
The estimated data collection time will be about 2 months. The school will be identified after which the the condoned learners of 2 focus groups (consisting of 5 learners each) will be interviewed. Thereafter, there will be a follow up session with the focus group to clarify any mis-understanding in the interview process. The teachers to be interviewed will be mathematics and mathematical literacy teachers and there after a follow up interview process will be conducted to allow the teachers to seek clarity on any question from the interview.

Have you already commenced with data collection? ☐ Yes ☑ No * I agree to not begin with data collection until this application has been approved by the ethics committee. ☑

Date of Submission 09-Jan-2019

* **Is this an umbrella project that has sub-projects linked to it (e.g. multiple honours student / research projects with different titles and protocols)** Yes ☐ No ☑

Internal Collaborators

* Are there any other internal UFS collaborators who are participating in this research? Yes ☐ No ☑

External Collaborators

* Are there any external collaborators who are participating in this research? No

Locations (Please note you need to click on the yellow + to add possible locations for your study)

* Select the primary location where the study will be carried out
Schools

Describe the location/s

* Use the text area below to indicate the location where you will be collecting data if the location was not listed in the pick list above and you had to chose 'Other'. If you chose a location from the pick list such as 'rural area' or 'hospital' then please use the text area to specify the location further e.g. exactly where/which rural area etc. Otherwise enter 'Not Applicable'.
Not Applicable

Research Problem/Module Purpose

* Research Problem (not more than 150 words)
The study will look at the effects of condonation on the promotion of senior phase mathematics learners into the FET phase who have not passed mathematics in grade 9. The study will investigate whether the condoned learners are supported or not in the senior phase, and also the effects thereof. The study will use an interpretivism paradigm and qualitative research methodology to investigate the senior phase learners in their natural setting. A case study research design will be used to understand the effects of condonation to learners in depth. Learners who were condoned in mathematics in Grade 9 in the year 2016 and 2017 and were promoted into Grade 10 will be purposefully selected to participate for the focus group interviews. Then, learners who are currently in Grades 11 and Grade 12 will be purposively selected to form part of the second focus groups interviews.

Research Questions

* Give the overarching research question/s of the study
Main Research Question What are the effects of condonation on the promotion of senior phase mathematics learners to the FET Phase? Sub-questions • How does condonation and promotion of Grade 9 learners into Grade 10 affect their mathematics performance into the FET phase who were not supported into the FET phase? • What

are the perceptions of teachers on the effects of condonation on learners promoted into the FET phase as a result of condonation and who were not supported into the FET phase? • How can FET phase learners be supported on the effects of condonation towards their mathematics performance?

Aim and Objectives of Study/ Module Outcomees

* Aim and Objectives of Study (not more than 150 words)

Aims and Objectives • To explore condonation and promotion of Grade 9 learners into Grade 10 affect their mathematics performance in the FET phase who were not academically supported into the FET phase. • To examine the perceptions of teachers on the effects of condonation on learners promoted into the FET phase as a result of condonation and who were not academically supported into the FET phase. • To determine how FET phase learners are supported on the effects of condonation towards their mathematics performance.

Research Design/ Module Design

* Provide a brief DESCRIPTION OF RESEARCH DESIGN, including procedures and methodology (not more than 300 words)

The research methodology adopted is a qualitative research design. An exploratory qualitative study will used and it will be inductive in nature. The condonation of senior phase learners will be under review by conducting open-ended interviews with the mathematics and mathematics literacy teachers and the two focus groups of learners will also have open-ended unstructured questions given. The analysis of documents will assist in the sampling of one school from the total number of combined school. It is envisaged that this school will be able to produce "rich" data since it has the highest percentage average of condoned and promoted learners for the year 2016, 2017 and 2018. It will represent all schools that have learners who were condoned in mathematics and then promoted into the FET phase. The selection of participants for the two focus groups and the school (site) for the study will require document analysis. Purposive sampling will be used to select the participants in a sample. Five learners for each focus group will be selected from the one sample school (Creswell J. W., 2014, p. 239). The learners' end of the year mathematics mark for will be ranked from highest to lowest and learners with two highest, the two lowest and one middle order mark will be selected. Data from interviews will be transcribed into texts and categorised further into themes for generating the narrative accounts that assisted to explain the data.

Summary/ Module Summary

* Give a brief description of the research in one short paragraph, not more than 150 words

The condonation of learners who did not meet the minimum requirements to pass mathematics in the senior phase, are affected by the Special Condonation Dispensation which started in 2016 and ended in 2018. This addendum assisted many learners, who initially failed mathematics in the senior phase and hence the grade, were in fact condoned and then promoted into the FET phase .These learners are condoned in mathematics throughout their school career and eventually reach Grade 12 without mastering the basic skills and knowledge Their lack of foundational skills continues to grow with the learners from their primary school into the higher grades in the FET phase. Learners who meet the minimum requirements of 40% to pass, perform better in mathematics in the next grade than learners who are condoned and then promoted because these learners lack the foundational skills and knowledge in mathematics to take on mathematics and mathematical literacy in the FET phase Therefore, many teachers and learners also believe that condonation is responsible for poor performance in Mathematics at Grade 12 level in public high schools.

Data Collection method/s (Please note you need to click on the yellow + to add different methods)

* What data collection method will be used? Select from list
Document Analysis
Focus Groups
Interview

Any other collection methods not mentioned above?

Other collection method/s? Explain in detail
Not applicable

Keywords (Please note you need to click on the yellow + to add keywords)

* Select the most appropriate keywords (one at a time) related to your study from the list and then (Click on the SAVE button on the left menu to see the selcted words on the e-form)
EDUCATION

Other related keywords not in the list? Please indicate

Other keywords
Keywords: condonation, grade repetition, learner support, promotion, learning support, promotion, retained learner, special condonation dispensation

Research Participants

* **Do you intend to use any human research participants in your study?** Yes ☑ No ☐

Category of Participants

Please tick the appropriate boxes below:

* **Adults** Yes ☑ No ☐

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* **Minors below 18 years** Yes ☑No☐

Research Participants Population

Please indicate the population group/s and gender/s of the research participants (Click on the yellow + to add population groups)

* Population: Indicate the population group by clicking on the black pencil icon and selecting from the list	* Gender
Children	-All types & genders (no differentiation)
Peers/Colleagues	-All types & genders (no differentiation)

Other Population Group/s (not mentioned in list)

If you have selected 'Other' in the populations pick list above, please specify which population group/s are applicable in the text area below:
not applicable

Please indicate the age group/s that the research participants fall under (Click on the yellow + to add age group/s)

* Age Group (please select from the list)
13 up to 18 years
35 up to 65 years

Please indicate the consent process/es that will be used for research participants (Click on the yellow + to add consent process/es)

* Consent Process (please select from the list)
Assent- Written
Parental/Legal Guardian Informed Consent
Written Informed Consent

Research Participants: Additional info

Note that it is possible you may involve participants not realizing they form part of one of the groups. Your planning should always take this into account along with strategies to deal with this should a crisis arise (e.g should one of your participants confide in you that they have been raped/abused).

* Provide information justifying and detailing your intention to involve the mentioned group/s in your research, as well as detailing extra precautions taken to protect vulnerable subjects
Ethical considerations are required to ensure that the participants' identities are protected. (Cresswell 2016, p. 244) An application for: • Ethical clearance will be made to the Research Ethics Committee of the faculty of education at the UFS. • Gaining entrance (site of study) to study the participants will be done via the school's District manager and principal (gatekeepers). • Participating teachers and the parents (of the learners participating in the study) will sign consent forms to obtain the necessary permission to conduct the research. • Learners will also sign assent forms to obtain the necessary permission to conduct the research. The researcher will gain the cooperation of the participants. There will be no undue influence on the direction of the study as the researcher will remain reflexive throughout and will disclose all information to the participants. The use of pseudonyms and a coding system for the questionnaires will ensure participants' confidentiality.

* **Estimated number of participants / records etc. to be used in the research? (Fill in Numeric value only on the line below)**
10

* Any other distinguishing characteristics for inclusion or exclusion? Please explain
Learners that will be selected will be learners who were condoned in mathematics in grade 9 in the year 2016 and 2017 respectively only.

* Will deception in any form be practiced against the research participants during the course of the research Yes ☐No☑

How will prospective participants be recruited?

* Brochure/ Flyer: ☐ Yes ☑No
* Poster: ☐ Yes ☑No
* Public Media Advert: ☐ Yes ☑No
* Telephonic recruitment: ☐ Yes ☑No
* Physical referral: ☐ Yes ☑No
* Direct e-mail: ☐ Yes ☑No
* Third party e-mail: ☐ Yes ☑No

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* Verbal invite: ☐ Yes ☑ No

* Third party verbal invite: ☐ Yes ☑ No

* Other method: ☑ Yes ☐ No

* Specify the method:
The selection of participants for the two focus groups and the school (site) for the study will require document analysis. Purposive sampling will be used to select the participants in a sample. Five learners for each focus group will be selected from the one sample school (Creswell J. W., 2014, p. 239). The learners' end of the year mathematics mark for will be ranked from highest to lowest and learners with two highest, the two lowest and one middle order mark will be selected.

Note: Third party refers to an individual / organisation not directly involved in the research

Risk mitigation

What kind of risk factor may be foreseen for general participant involvement?

* Emotional distress Yes ☐ No ☑

* Personal or Cultural embarassment Yes ☐ No ☑

* Breach of confidentiality Yes ☐ No ☑

* Economic harm Yes ☐ No ☑

* Legal Jeopardy Yes ☐ No ☑

* Physical pain or injury Yes ☐ No ☑

* Reputation harm Yes ☐ No ☑

* Loss of work time / study time Yes ☐ No ☑

* Negative impact on professional / personal relationships Yes ☐ No ☑

* Possible unfulfilled expectations by participants Yes ☐ No ☑

* Participants may include children or young people (under 18 years of age) without parental consent. Yes ☐ No ☑

* Participants may include those who are unable to give informed consent and consent will only be obtained at a later stage. ☐ Yes ☑ No

* Collection, use or disclosure of personal information from an organisation without consent of the participant. ☐ Yes ☑ No

* Collection, use or disclosure of personal information from a private sector organisation without consent of the participant. ☐ Yes ☑ No

* Audio-visual recording of participants which may be of a sensitive or compromising nature. Yes ☐ No ☑

* Research involving the deception of participants, concealment or covert observation. Yes ☐ No ☑

* Participants will be offered payments or inducements to encourage their involvement in the project. Yes ☐ No ☑

* Other? Yes ☐ No ☑

* **Specify any risks to the researchers themselves and steps taken in this regard**
None

Your planning should indicate how foreseeable crisis situations will be dealt with, for example, should an interviewee admit to criminal activity during a confidential interview, what procedure will be followed.

* **Is there any chance for a potential conflict of interest to arise in this research project? (e.g. evaluating a programme that you are part of; evaluating your own students 'success'; doing research on a question directly related to your employer, etc.)** Yes ☐ No ☑

Third Party Data

* Will data on research participants be accessed via a third party (e.g from school or doctor?) Yes ☐ No ☑

Confidentiality

Note that security of sensitive or confidential data is your personal responsibility. In the event of theft of sensitive, idenfiable data, you will need to disclose risks to participants and your security precautions may be scrutinized by authorities. Please do not take this lightly.

* **Will electronic data be secured on a password protected computer, drive or server?** YES

* Please elaborate in the text area below:
The data stored will be encrypted and stored on an external "serve" with a password. The "server" is more secured than the researcher's laptop. The "server" are configured for security of data and back up of new data is possible.

* **Will hardcopies of data be securely locked away in a cabinet and office?** YES

* Please elaborate in the text area below:

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Yes,hardcopies of data be securely locked away in the researcher's safe and access is restricted only to the researcher. If the data is required to be stored for an extended period of time, the hard copies can be stored in an off-site storage facility, e.g. the researchers bank.

* **Can participants be identified by inference within the published research findings?** Yes ☐ No ☑

Impact of Research

* **Please state, who will benefit from this this research, and how will they draw benefit from the research**

The significance of this study lays in investigating the effects of condonation on the promotion of senior phase mathematics learners into the FET phase who did not receive any academic support in the new year. Therefore, the study has the potential to benefit current and future learners and teacher's condonation of mathematics Grade 7 learners in the Amajuba district. The findings of this study are intended to add value to current and further research on the effects of condonation on the promotion of senior phase mathematics learners to the FET phase who were not academically supported into the FET phase. The study will also suggest ways in which teachers can improve on their implementation and consistency of support given to condoned mathematics learners.

DECLARATION BY APPLICANT

I certify that all researchers involved in this research project have thoroughly examined the 'Ethical Clearance Guidelines for Researchers' document and have agreed to abide by this code of conduct in their research.

I am aware of the relevant health authority and legal requirements associated with the research to be conducted and will undertake to ensure no illegal activities are engaged in with regards to this research.

I declare that all information provided by me in this application is true and honest and that I will abide by undertakings I have provided in this application.

I agree to keep the Research Ethics Office of the Faculty updated on any changes or adjustments to the research procedures and to obtain written approval before engaging in said changes.

* **I have read and agreed to the above stipulations** ☑

* **I acknowledge that entering my name on this form is the equivalent of my signature** ☑

Date: 03-Sep-2019

PROJECT FUNDING & SPONSORS

* Is this project funded or will a grantor / third party, sponsor the study? No

* .If no, who is responsible for any expenses? Researcher Self

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YOU HAVE REACHED THE END OF THE E-FORM

Scroll up to the top of the Form and click on the tick-box next to the caption "Complete" in the top right hand corner.

Once the Form is completed you can close the window and continue with the rest of the submission package.

University of the Free State
205 Nelson Mandela Ave, Park West, Bloemfontein, 9301
PHONE: +27(0)51 401 9451 FAX: +27(0)51 401 2096
www.ufs.ac.za

Appendix B: Approval of ethics application

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA
UFS UV

GENERAL/HUMAN RESEARCH ETHICS COMMITTEE (GHREC)

16-Oct-2019

Dear Mr Bhagwonparsadh, Yudvir Y

Application Approved

Research Project Title:
The effects of condonation on the promotion of senior phase mathematics learners into the FET phase.

Ethical Clearance number:
UFS-HSD2019/0042

We are pleased to inform you that your application for ethical clearance has been approved. Your ethical clearance is valid for twelve (12) months from the date of issue. We request that any changes that may take place during the course of your study/research project be submitted to the ethics office to ensure ethical transparency. furthermore, you are requested to submit the final report of your study/research project to the ethics office. Should you require more time to complete this research, please apply for an extension. Thank you for submitting your proposal for ethical clearance; we wish you the best of luck and success with your research.

Yours sincerely

Prof Derek Litthauer
Chairperson: General/Human Research Ethics Committee

Digitally signed by Derek Litthauer
Date: 2019.10.16 11:59:18 +02'00'

205 Nelson Mandela Drive
Park West
Bloemfontein 9301
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Bloemfontein 9300
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Appendix C: Permission to conduct research

Director

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

The Provincial Director of Education, Province of KwaZulu Natal, Private Bag X 9137, PMB, 3200

I am doing research and would like to request permission to conduct my research in the district of Amajuba in Newcastle.

I have already received consent to conduct my research in the Amajuba district. Please refer to letter attached.

DATE

2019/03/15

TITLE OF THE RESEARCH PROJECT

The effects of condonation on the promotion of senior phase mathematics learners into the FET phase.

PRINCIPAL INVESTIGATOR / RESEARCHER(S) NAME(S) AND CONTACT NUMBER(S):

Yudvir Bhagwonparsadh Student number: 2017560745 Contact number: 083226824 924

FACULTY AND DEPARTMENT:

Name of Faculty: Education: Curriculum Studies

Name of Department: Education

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Name of Study Leader (UFS staff member): Professor M. Rabaza

Contact number: 083 4756 201

WHAT IS THE AIM / PURPOSE OF THE STUDY?

The purpose of the study is to investigate the effects of condonation on the promotion of Senior Phase mathematics learners to the FET phase.

WHO IS DOING THE RESEARCH?

I will be personally doing the research. I am based in SE Vawda Primary school and I am the Deputy Principal. The reason for me doing the research is, in my experience, learners are indiscriminately condoned in mathematics and then promoted into the Further Education and Training (FET) phase. In 2016 during a Promotions Committee meeting, I raised the concern at district level that many learners lack the competency to take mathematics in the FET phase. I have observed that there is a high failure rate of senior phase mathematics learners and these learners prefer to take mathematical literacy in the FET phase. This has a negative impact on learners when they apply to study science subjects at higher education intuitions; hence the need for this study.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the UFS. Seeking consent from you is part of the ethical application. Once ethical approval is granted, I will present to you a copy as proof of approval.

Approval number: *To follow*

WHY ARE YOUR INSTITUTION/ORGANISATION/COMPANY INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

I chose the Amajuba district because it is where I have identified the learners are indiscriminately condoned in mathematics and then promoted into the Further Education and Training (FET) phase.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The participants' actual role in the study will be to answer questions. The study involves focus groups and un-structured interviews that will be audio recorded. The questions asked will be 1.

How do condoned senior phase mathematics learners cope with mathematics in the FET phase? 2. What are the experiences of teachers when teaching learners who were condoned in mathematics in the senior phase and are now in the FET phase? 3. How does the condonation of senior phase mathematics learners affect their subject choices in the FET phase? The expected duration of participation and the time needed to complete specific research activities (focus groups and interview) will be 2 hours. The time allocated to conduct interviews and focus groups will be 1.5 hours. The possible risk to the children may experience emotions of a negative self-image due to be teased by other learners. Working with children is a given that they are a vulnerable group therefore all ethical consideration and protocols will be followed.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

The findings are intended to add value to current and further research on the effects of condonation on the promotion of senior phase mathematics learners to the FET phase. The study will provide more information regarding the effectiveness of condonation. The study will also suggest ways in which teachers can improve on their implementation and consistency of condonation in mathematics. Participating teachers and the parents (of the learners participating in the study) will sign consent forms to obtain the necessary permission to conduct the research. The researcher will gain the cooperation of the participants. The use of pseudonyms and a coding system for the questionnaires will ensure participants' confidentiality.

WHAT ARE THE POTENTIAL RISKS TAKING PART IN THIS STUDY?

The findings are intended to add value to current and further research on the effects of condonation on the promotion of senior phase mathematics learners into the FET phase. The study will provide more information regarding the effectiveness of condonation. The study will also suggest ways in which teachers can improve on their implementation and consistency of condonation in mathematics. Participating teachers and the parents (of the learners participating in the study) will sign consent forms to obtain the necessary permission to conduct the research. The researcher will gain the cooperation of the participants. The use of pseudonyms and a coding system for the questions will ensure participants' confidentiality.

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HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

Hard copies of your answers will be stored by the researcher for a period of five years and locked in the researcher's safe located in the researcher's residential address for future research or academic purposes. Electronic information will be stored on my password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After a period of five years all hard copies of the data will be shredded. All electronic data will be deleted. There is no possible inconvenience and/or discomfort to the participants because all precautions will be taken not to disclose their identities.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

There is no payment or reward offered, financial or otherwise to the participants.

HOW WILL THE INSTITUTION / ORGANISATION / COMPANY BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?

If you would like to be informed of the final research findings, please contact Y. Bhagwonparsadh on 083 226 8924 or yudvirbhagwon@gmail.com. The findings are accessible for the year 2020 only. Should you have concerns about the way in which the research has been conducted, you may contact my supervisor Dr M. Rabaza of the UFS on 084 4756 201 or rabazam@ufs.ac.za

Yours sincerely

Researcher: Y. Bhagwonparsadh

Date: 2019/03/15

I, The Provincial Director of Education, Province of KwaZulu Natal, Private Bag x 9137, PMB, 3200

I hereby give / do not give free and informed consent to your study to be undertaken in the Newcastle district.

- I give / do not give the researcher permission to make use of the data gathered, subject to the stipulations indicated in the above letter.
- I understand what the study is about and what the risks and benefits are to the district and participants.

_____

Signature of the Director of Education:

Date: _____

STAMP

Researcher: Y. Bhagwonparsadh

Date: 2019/03/15

District director

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA
UFS UV

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

Dear Mr SDR Kubheka, the Acting District Director of Education, Newcastle District Office, Newcastle 2940

I am doing research and would like to request permission to conduct my research in the district of Amajuba in Newcastle.

I have already received consent to conduct my research in the Amajuba district. Please refer to letter attached.

DATE

2019/01/07

TITLE OF THE RESEARCH PROJECT

The effects of condonation on the promotion of senior phase mathematics learners into the FET phase.

PRINCIPAL INVESTIGATOR / RESEARCHER(S) NAME(S) AND CONTACT NUMBER(S):

Yudvir Bhagwonparsadh Student number: 2017560745 Contact number: 083226824 924

FACULTY AND DEPARTMENT:

Name of Faculty: Education: Curriculum Studies

Name of Department: Education

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Name of Study Leader (UFS staff member): Dr M Rabaza

Contact number: 083 4756 201

WHAT IS THE AIM / PURPOSE OF THE STUDY?

The purpose of the study is to investigate the effects of condonation on the promotion of Senior Phase mathematics learners to the FET phase.

WHO IS DOING THE RESEARCH?

I will be personally doing the research. I am based in SE Vawda Primary school and I am the Deputy Principal. The reason for me doing the research is, in my experience, learners are indiscriminately condoned in mathematics and then promoted into the Further Education and Training (FET) phase. In 2016 during a Promotions Committee meeting, I raised the concern at district level that many learners lack the competency to take mathematics in the FET phase. I have observed that there is a high failure rate of senior phase mathematics learners and these learners prefer to take mathematical literacy in the FET phase. This has a negative impact on learners when they apply to study science subjects at higher education intuitions; hence the need for this study.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the UFS. Seeking consent from you is part of the ethical application. Once ethical approval is granted, I will present to you a copy as proof of approval.

Approval number: *To follow*

WHY ARE YOUR INSTITUTION/ORGANISATION/COMPANY INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

I chose the Amajuba district because it is where I have identified the learners are indiscriminately condoned in mathematics and then promoted into the Further Education and Training (FET) phase.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The participants' actual role in the study will be to answer questions. The study involves focus groups and un-structured interviews that will be audio recorded. The questions asked will be 1.

How do condoned senior phase mathematics learners cope with mathematics in the FET phase? 2. What are the experiences of teachers when teaching learners who were condoned in mathematics in the senior phase and are now in the FET phase? 3. How does the condonation of senior phase mathematics learners affect their subject choices in the FET phase? The expected duration of participation and the time needed to complete specific research activities (focus groups and interview) will be 2 hours. The time allocated to conduct interviews and focus groups will be 1.5 hours. The possible risk to the children may experience emotions of a negative self-image due to be teased by other learners. Working with children is a given that they are a vulnerable group therefore all ethical consideration and protocols will be followed.

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Yours sincerely

Y. Bhagwonparsadh

I, *SDR Kubheka, the Acting District Director of Education, Newcastle District Office,*

- I hereby give / do not give free and informed consent to your study to be undertaken in the Newcastle district.
- I give / do not give the researcher permission to make use of the data gathered, subject to the stipulations indicated in the above letter.
- I understand what the study is about and what the risks and benefits are to the district and participants.

_____

Signature of the Acting District Director:

Date: _____

STAMP

_____

Signature of researcher:

Date: _____

Principal

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA
UFS UV

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

Dear Principal

I am doing research and would like to request permission to use your school as a sample school and to select one school from the sample schools to conduct research.

I have already received consent to conduct my research in the Amajuba district. Please refer to letter attached.

DATE

2019/04/04

TITLE OF THE RESEARCH PROJECT

The effects of condonation on the promotion of senior phase mathematics learners into the FET phase.

PRINCIPAL INVESTIGATOR / RESEARCHER(S) NAME(S) AND CONTACT NUMBER(S):

Yudvir Bhagwonparsadh Student number: 2017560745 Contact number: 083226824 924

FACULTY AND DEPARTMENT:

Name of Faculty: Education: Curriculum Studies

Name of Department: Education

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Name of Study Leader (UFS staff member): Dr M Rabaza

Contact number: 084 4756 201

WHAT IS THE AIM / PURPOSE OF THE STUDY?

The purpose of the study is to investigate the effects of condonation on the promotion of Senior Phase mathematics learners to the FET phase.

WHO IS DOING THE RESEARCH?

I will be personally doing the research. I am based in SE Vawda Primary school and I am the Deputy Principal. The reason for me doing the research is, in my experience, learners are indiscriminately condoned in mathematics and then promoted into the Further Education and Training (FET) phase. In 2016 during a Promotions Committee meeting, I raised the concern at district level that many learners lack the competency to take mathematics in the FET phase. I have observed that there is a high failure rate of senior phase mathematics learners and these learners prefer to take mathematical literacy in the FET phase. This has a negative impact on learners when they apply to study science subjects at higher education intuitions; hence the need for this study.

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Approval number: *To follow*

WHY ARE YOUR INSTITUTION/ORGANISATION/COMPANY INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

I chose the Amajuba district because it is where I have identified the learners are indiscriminately condoned in mathematics and then promoted into the Further Education and Training (FET) phase.

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Yours sincerely

Researcher: Y. Bhagwonparsadh

Date: 2019/04/04

I, Principal of _____ School, Newcastle 2940,

- I hereby give / do not give free and informed consent to your study to be undertaken in the Newcastle district.
- I give / do not give the researcher permission to make use of the data gathered, subject to the stipulations indicated in the above letter.
- I understand what the study is about and what the risks and benefits are to the district and participants.

_____

Signature of the school principal:

Date: _____

SCHOOL STAMP

Researcher: Y. Bhagwonparsadh

Date: 2019/04/04

Appendix D: School principal

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA
UFS UV

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

Dear Principal T Mthethwa of Panorama Combined school, Newcastle;

I am doing research and would like to request permission to use your school as a sample school and to select one school from the sample schools to conduct research.

I have already received consent to conduct my research in the Amajuba District. Please refer to letter attached.

DATE

2019/10/04

TITLE OF THE RESEARCH PROJECT

The effects of condonation on the promotion of senior phase mathematics learners into the FET phase.

PRINCIPLE INVESTIGATOR / RESEARCHER(S) NAME(S) AND CONTACT NUMBER(S):

Yudvir Bhagwonparsadh Student number: 2017560745 Contactnumber: 083226824 924

FACULTY AND DEPARTMENT:

Name of Faculty: Education: Curriculum Studies

Name of Department: Education

STUDYLEADER(S) NAME AND CONTACT NUMBER:

Name of Study Leader (UFS staff member): Dr M Rabaza
Contact number: 084 4756 201

WHAT ARE THE AIMS / PURPOSE OF THE STUDY?

The purpose of the study is to investigate the effects of condonation on the promotion of Senior Phase Mathematics learners to the FET Phase.

WHO IS DOING THE RESEARCH?

I will be personally doing the research. I am based in SE Vawda Primary school and I am the Deputy Principal. The reason for me doing the research is, in my experience, learners are indiscriminately condoned in mathematics and then promoted into the Further Education and Training (FET) Phase. In 2016 during a Promotions Committee meeting, I raised the concern at district level that many learners lack the competency to take mathematics in the FET Phase. I have observed that there is a high failure rate of senior phase mathematics learners and these learners prefer to take mathematics literacy in the FET Phase. This has a negative impact on learners when they apply to study science subjects at higher education intuitions; hence the need for this study.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

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Approval number: *To follow*

WHY ARE YOUR INSTITUTION/ORGANISATION/COMPANY INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

I chose the Amajuba district because it is where I have identified the learners are indiscriminately condoned in mathematics and then promoted into the Further Education and Training (FET) Phase.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The participant's actual role in the study will be to answer questions. The study involves focus groups and un-structured interviews that will be audio recorded. The questions asked will be 1. How do condoned senior phase mathematics learners cope with mathematics in the FET Phase? 2. What are the experiences of teachers when teaching learners who were condoned in mathematics in the senior phase and are now in the FET Phase? 3. How does the condonation of senior phase mathematics learners affect their subject choices in the FET Phase? The expected duration of participation and the time needed to complete specific research activities (focus groups and interview) will be 2hours. The time allocated to conduct interviews and focus groups will be 1.30hrs. The possible risk to the children may experience emotions of a negative self-image due to be teased by other learners. Working with children is a given that they are a vulnerable group therefore all ethical consideration and protocols will be followed.

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UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA
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Yours sincerely

Researcher: Y.Bhagwonparsadh

Date: 2019/10/04

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
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UFS UV

I, *Principal of* THEMBA R. MTHETHWA *School, Newcastle 2940,*

- I hereby give / ~~do not give~~ free and informed consent to your study to be undertaken in the Newcastle district.

- I give / ~~do not give~~ the researcher permission to make use of the data gathered, subject to the stipulations indicated in the above letter.

- I understand what the study is about and what the risks and benefits are to the district and participants.

Signature of the School Principal:

Date: 07/10/2019

SCHOOL STAMP

OFFICIAL / AMPTELIK
PANORAMA COMBINED SCHOOL
07 OCT 2019
P.O. BOX 5331 NEWCASTLE 2940
TEL: 034 318 3383
FAX: 034 318 3384

Researcher: Y.Bhagwonparsadh

Date: 2019/10/04

Department of Basic Education

education

Department:
Education
PROVINCE OF KWAZULU-NATAL

Enquiries: Phindile Duma/Buyi Ntuli **Tel:** 033 392 1063/51 **Ref.**:2/4/8/4034

Mr Yudvir Bhagwonparsadh
P.O. Box 205
NEWCASTLE
2940

Dear Mr Bhagwonparsadh

PERMISSION TO CONDUCT RESEARCH IN THE KZN DoE INSTITUTIONS

Your application to conduct research entitled: **"THE EFFECTS OF CONDONATION ON THE PROMOTION OF SENIOR PHASE MATHEMATICS LEARNERS INTO THE FET PHASE"**, in the KwaZulu-Natal Department of Education Institutions has been approved. The conditions of the approval are as follows:

1. The researcher will make all the arrangements concerning the research and interviews.
2. The researcher must ensure that Educator and learning programmes are not interrupted.
3. Interviews are not conducted during the time of writing examinations in schools.
4. Learners, Educators, Schools and Institutions are not identifiable in any way from the results of the research.
5. A copy of this letter is submitted to District Managers, Principals and Heads of Institutions where the Intended research and interviews are to be conducted.
6. The period of investigation is limited to the period from 21 January 2020 to 10 January 2022.
7. Your research and interviews will be limited to the schools you have proposed and approved by the Head of Department. Please note that Principals, Educators, Departmental Officials and Learners are under no obligation to participate or assist you in your investigation.
8. Should you wish to extend the period of your survey at the school(s), please contact Miss Phindile Duma /Mrs Buyi Ntuli at the contact numbers above.
9. Upon completion of the research, a brief summary of the findings, recommendations or a full report/dissertation/thesis must be submitted to the research office of the Department. Please address it to The Office of the HOD, Private Bag X9137, Pietermaritzburg, 3200.
10. Please note that your research and interviews will be limited to schools and institutions in KwaZulu-Natal Department of Education.

Dr. EV Nzama
Head of Department: Education
Date: 21 January 2020

KWAZULU-NATAL DEPARTMENT OF EDUCATION
Postal Address: Private Bag X9137 • Pietermaritzburg • 3200 • Republic of South Africa
Physical Address: 247 Burger Street • Anton Lembede Building • Pietermaritzburg • 3201
Tel.: +27 33 392 1063 • **Fax.:** +27 033 392 1203• **Email:**Phindile.Duma@kzndoe.gov.za •**Web:**www.kzneducation.gov.za
Facebook: KZNDOE….Twitter: @DBE_KZN….Instagram: kzn_education….Youtube:kzndoe

...Championing Quality Education - Creating and Securing a Brighter Future

District Office

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA
UFS UV

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

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2019/01/07

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Yudvir Bhagwonparsadh Student number: 2017560745 Contactmumber: 083226824 924

FACULTY AND DEPARTMENT:

Name of Faculty: Education: Curriculum Studies

Name of Department: Education

STUDYLEADER(S) NAME AND CONTACT NUMBER:

Name of Study Leader (UFS staff member): Professor M D Mosimege
Contact number: 051 401 9834

WHAT IS THE AIM / PURPOSE OF THE STUDY?

The purpose of the study is to investigate the effects of condonation on the promotion of Senior Phase Mathematics learners to the FET Phase.

WHO IS DOING THE RESEARCH?

I will be personally doing the research. I am based in SE Vawda Primary school and I am the Deputy Principal. The reason for me doing the research is, in my experience, learners are indiscriminately condoned in mathematics and then promoted into the Further Education and Training (FET) Phase. In 2016 during a Promotions Committee meeting, I raised the concern at district level that many learners lack the competency to take mathematics in the FET Phase. I have observed that there is a high failure rate of senior phase mathematics learners and these learners prefer to take mathematics literacy in the FET Phase. This has a negative impact on learners when they apply to study science subjects at higher education intuitions; hence the need for this study.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of UFS. Seeking consent from you is part of the ethical application. Once Ethical Approval is granted, I will present to you a copy as proof of approval.

Approval number: *To follow*

WHY ARE YOUR INSTITUTION/ORGANISATION/COMPANY INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

I chose the Amajuba district because it is where I have identified the learners are indiscriminately condoned in mathematics and then promoted into the Further Education and Training (FET) Phase.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The participant's actual role in the study will be to answer questions. The study involves focus groups and un-structured interviews that will be audio recorded. The questions asked will be 1. How do condoned senior phase mathematics learners cope with mathematics in the FET Phase? 2. What are the experiences of teachers when teaching learners who were condoned in mathematics in the senior phase and are now in the FET Phase? 3. How does the condonation of senior phase mathematics learners affect their subject choices in the FET Phase? The expected duration of participation and the time needed to complete specific research activities (focus groups and interview) will be 2hours. The time allocated to conduct interviews and focus groups will be 1.30hrs. The possible risk to the children may experience emotions of a negative self-image due to be teased by other learners. Working with children is a given that they are a vulnerable group therefore all ethical consideration and protocols will be followed.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

The findings are intended to add value to current and further research on the effects of condonation on the promotion of senior phase mathematics learners to the FET phase. The study will provide more information regarding the effectiveness of condonation. The study will also suggest ways in which teachers can improve on their implementation and consistency of condonation in mathematics. Participating teachers and the parents (of the learners participating in the study) will sign consent forms to obtain the necessary permission to conduct the research. The researcher will gain the cooperation of the participants. The use of pseudonyms and a coding system for the questionnaires will ensure participants' confidentiality.

WHAT IS THE POTENTIAL RISKS TAKING PART IN THIS STUDY?

The findings are intended to add value to current and further research on the effects of condonation on the promotion of senior phase mathematics learners into the FET phase. The study will provide more information regarding the effectiveness of condonation. The study will also suggest ways in which teachers can improve on their implementation and consistency of condonation in mathematics. Participating teachers and the parents (of the learners participating in the study) will sign consent forms to obtain the necessary permission to conduct the research. The researcher will gain the cooperation of the participants. The use of pseudonyms and a coding system for the questions will ensure participants' confidentiality.

WILL THE INFORMATION BE KEPT CONFIDENTIAL?

The names of participants will not be recorded anywhere therefore no one will be able to link the participants to their answers. The use of pseudonyms and a coding system for the questionnaires will ensure participants' confidentiality and the participants will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. A transcriber and I will only have access to the data. The transcriber will sign a confidentiality agreement. The data may be made available to other people who have a vested interest in the study. I shall, based on my discretion make the data available only after a confidentiality agreement is signed. Participants will be informed that their anonymous data may be used for research report, journal articles and conference presentation. Participant's privacy will be protected in any publication of the information. Individual participants will not be identifiable in a report. While every effort will be made by me to ensure that participants will not be connected to the information that you share during the focus group, I cannot guarantee that other participants in the focus group will treat information confidentially. I shall, however, encourage all participants to do so. For this reason I will advise participants not to disclose personal and sensitive information in the focus group. Participants will be explained that they can refuse to take part even if their parents/gate-keepers have agreed to their participation. Participants may also leave the study at any time without any repercussions forth coming.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

Hard copies of your answers will be stored by the researcher for a period of five years and locked in the researcher's safe located in the researcher's residential address for future research or academic purposes. Electronic information will be stored on my password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After a period of five years all hard copies of the data will be shredded. All electronic data will be deleted. There is no possible inconvenience and/or discomfort to the participants because all precautions will be taken not to disclose their identities.

WILL THERE BE PAYMENT OR ANY INCENTIVES FOR PARTICPATING IN THIS STUDY?

There is no payment or reward offered, financial or otherwise to the participants.

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UFS UV

HOW WILL THE INSTITUTION / ORGANISATION / COMPANY BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?

If you would like to be informed of the final research findings, please contact Y.Bhagwonparsadh on 083 226 8924 or yudvirbhagwon@gmail.com. The findings are accessible for the year 2020 only. Should you have concerns about the way in which the research has been conducted, you may contact my supervisor Professor M D Mosimege of the UFS on 051 401 9834 or mosimegemd@ufs.ac.za

Yours sincerely

Y.Bhagwonparsadh

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YUNIVESITHI YA FREISTATA
UFS UV

I, *SDR Kubheka, the Acting District Director of Education, Newcastle District Office,*

- I hereby give / do ~~not~~ give free and informed consent to your study to be undertaken in the Newcastle district.

- I give / ~~do not give~~ the researcher permission to make use of the data gathered, subject to the stipulations indicated in the above letter.

- I understand what the study is about and what the risks and benefits are to the district and participants.

Signature of the Acting District Director:

Date: 18/02/2019

STAMP

KZN DEPT. OF EDUCATION
AMAJUBA District Office
18 FEB 2019
Private Bag X6618
Newcastle, 2940
Fax: 034 317 2158

Signature of Researcher:

Date: 18/02/2019

Appendix E: Consent from teachers

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
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UFS UV

RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE

2019 03 15

TITLE OF THE RESEARCH PROJECT

The effects of condonation on the promotion of senior phase mathematics learners into the FET phase.

PRINCIPAL INVESTIGATOR / RESEARCHER(S) NAME(S) AND CONTACT NUMBER(S):

Yudvir Bhagwonparsadh Student number: 2017560745 Contact number: 083226824 924

FACULTY AND DEPARTMENT:

Name of Faculty: Education: Curriculum Studies

Name of Department: Education

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Name of Study Leader (UFS staff member): Professor M Rabaza

Contact number: 083 4756 201

To the mathematics and mathematic literacy teachers of _____

_____School.

Name of teacher: _____

Current subject teaching: _____

WHAT IS THE AIM / PURPOSE OF THE STUDY?

The purpose of the study is to investigate the effects of condonation on the promotion of Senior Phase mathematics learners into the FET phase.

WHO IS DOING THE RESEARCH?

I will be personally doing the research. I am based in SE Vawda Primary school and I am the Deputy Principal. The reason for me doing the research is, in my experience, learners are indiscriminately condoned in mathematics and then promoted into the Further Education and Training (FET) phase. In 2016 during a Promotions Committee meeting, I raised the concern at district level that many learners lack the competency to take mathematics in the FET phase. I have observed that there is a high failure rate of senior phase mathematics learners and those learners prefer to take mathematical literacy in the FET phase. This has a negative impact on learners when they apply to study science subjects at higher education intuitions; hence the need for this study.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of the UFS. Seeking consent from you is part of the ethical application. Once Ethical Approval is granted, I will present to you a copy as proof of approval.

Approval number: *To follow*

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

The research population of this study comprises the senior phase and FET phase learners as well as the mathematics and mathematical literacy teachers from a selected school in the

Amajuba district in Newcastle. The focus group will consist of 6 learners. The reason for using a focus group is to collect rich data from the learners regarding their thoughts and experiences. The focus group will be able to provide rich data concerning the effects of condonation on their promotion into the FET phase.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The participant's actual role in the study will be to answer questions. The study involves focus groups and un-structured interviews that will be audio recorded. The questions asked will be 1. How do condoned senior phase mathematics learners cope with mathematics in the FET phase? 2. What are the experiences of teachers when teaching learners who were condoned in mathematics in the senior phase and are now in the FET phase? 3. How does the condonation of senior phase mathematics learners affect their subject choices in the FET phase? The expected duration of participation and the time needed to complete specific research activities (focus groups and interview) will be 2 hours. The time allocated to conduct interviews and focus groups will be 1.5 hours. The possible risk to the children may experience emotions of a negative self-image due to be teased by other learners. Working with children is a given that they are a vulnerable group therefore all ethical consideration and protocols will be followed.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary and that there is no penalty or loss of benefit for non-participation. Being in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

The findings are intended to add value to current and further research on the effects of condonation on the promotion of senior phase mathematics learners to the FET phase. The study will provide more information regarding the effectiveness of condonation. The study will also suggest ways in which teachers can improve on their implementation and consistency of condonation in mathematics. Participating teachers and the parents (of the learners participating in the study) will sign consent forms to obtain the necessary permission to conduct

the research. The researcher will gain the cooperation of the participants. The use of pseudonyms and a coding system for the questions will ensure participants' confidentiality.

WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?

Participating learners will be removed from normal teaching in order to participate fully in the research. At the learners soonest, it is expected that learners will cover up with lost teaching time done in the class by the class teacher.

WILL WHAT I SAY BE KEPT CONFIDENTIAL?

The names of participants will not be recorded anywhere therefore no one will be able to link the participants to their answers. The use of pseudonyms and a coding system for the questionnaires will ensure participants' confidentiality and the participants will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. A transcriber and I will only have access to the data. The transcriber will sign a confidentiality agreement. The data may be made available to other people who have a vested interest in the study. I shall, based on my discretion make the data available only after a confidentiality agreement is signed. Participants will be informed that their anonymous data may be used for research report, journal articles and conference presentation. Participants' privacy will be protected in any publication of the information. Individual participants will not be identifiable in a report. While every effort will be made by me to ensure that participants will not be connected to the information that you share during the focus group, I cannot guarantee that other participants in the focus group will treat information confidentially. I shall, however, encourage all participants to do so. For this reason I will advise participants not to disclose personal and sensitive information in the focus group. Participants will be explained that they can refuse to take part even if their parents/gate-keepers have agreed to their participation. Participants may also leave the study at any time without any repercussions forth coming.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

Hard copies of your answers will be stored by the researcher for a period of five years and locked in the researcher's safe located in the researcher's residential address for future research

or academic purposes. Electronic information will be stored on my password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After a period of five years all hard copies of the data will be shredded. All electronic data will be deleted.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

There is no payment or reward offered, financial or otherwise to the participants.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?

If you would like to be informed of the final research findings, please contact Y. Bhagwonparsadh on 083 226 8924 or yudvirbhagwon@gmail.com. The findings are accessible for the year 2020 only. Should you have concerns about the way in which the research has been conducted, you may contact my supervisor Dr M Rabaza of the UFS on 084 4756 201 or rabazam@ufs.ac.za

Thank you for taking the time to read this information sheet and for participating in this study.

Yours sincerely

Researcher: Y. Bhagwonparsadh

Date: 2019/03/15

I, _____,

the mathematical literacy teacher of _____School:

- Hereby give free and informed consent to my participation in the abovementioned research study
- Understand what the study is about and why my participation and what the risks and benefits are.
- Give the researcher permission to make use of the data gathered from my participation, subject to the stipulations indicated in the above letter.

_____

Signature of participant:

Date: _____

Researcher: Y. Bhagwonparsadh

Date: 2019/03/15

Appendix F: Consent for learners to participate

TITLE OF THE RESEARCH PROJECT:

The effects of condonation on the promotion of senior phase mathematics learners into the FET phase.

RESEARCHERS NAME(S): Bhagwonparsadh Yudvir

ADDRESS: 1 a Toucan Place, Newcastle, 2940

CONTACT NUMBER: 083 2268 924

What is research*?*

Research is a process of finding new knowledge about things. We conduct a research or a study to help find out more information about phenomena that affects us. Research also helps us to find better ways of solving our problems.

What is this research project all about?

Condonation affects the promotion of senior phase mathematics learners into the FET phase. Learners condoned in mathematics often opt for mathematical literacy rather than mathematics in the FET phase.

Therefore the study will investigate the effects of condonation on the promotion of senior phase mathematics learners into the FET phase.

The findings are intended to add value to current and further research on the effects of condonation on the promotion of senior phase mathematics learners into the FET phase. The study will provide more information regarding the effectiveness of condonation. The study will

also suggest ways in which teachers can improve on their implementation and consistency of condonation in mathematics in the senior phase.

Why have I been invited to take part in this research project?

You had been condoned in mathematics in the senior phase and then promoted into the FET phase. You have "rich information" to share. You are the subject of the study.

Who is doing the research?

The researcher is Yudvir Bhagwonparsadh. I am a deputy principal of SE Vawda Primary school. My employer is the Department of Basic Education. I am doing this study so that I can provide scientific data on the effects of condonation on the promotion of senior phase mathematics learners into the FET phase and suggest ways to improve the condonation policy.

What will happen to me in this study?

You will be in a group of condoned learners who are presently in the FET phase. You will be asked a series of questions. You will be required to freely engage in the group and contribute honestly to the discussion.

I will be observing the discussions and I will make written observations. There will be audio recordings of the discussions. Your will remain anonymous. You may withdraw from the group at any time without any consequence. The duration of the discussion should be no longer than 1 hour and 30 minutes on a school day of which I will negotiate with the principal.

Is my participation voluntary?

Your participation in this study is voluntary. If you decide not to participate in this study,

your decision will not affect your future relations with the University of the Free state, its personnel, and associated institutions. If you decide to participate in the study, you are free to withdraw your consent from participating at the time you choose to do so.

What if I do not want to do this?

You may not participate in the study although your parent may have given consent. You may choose to stop participating in the study at any time without any repercussions**.**

Can anything bad happen to me?

There possible risks that you may be exposed to other learners who are promoted and were not condoned at first; they may come to know your identities from other participants in the group. They may tease you and this may affect your self-confidence. Should this occur, you may immediately contact your parents and me to resolve the matter.

Can anything good happen to me?

There are plenty of benefits for your participation in the research. You contribution to the study may add more value to the Condonation Policy. You will be part of study that is sanctioned by the University of the Free State (UFS) and therefore you will be exposed to the university of which you may consider going to study in the near future.

You will not be financially compensated for your participation in the study.

Will anyone know I am in the study?

If you agree to participate in this study by signing this document, I may disclose the findings to the University of the Free State or the General and Health Research Ethics Council (GHREC) for auditing purposes. Any data that is obtained in connection with this study which can identify you will remain confidential and will be disclosed only with your permission.

What does my authorisation mean?

You are making a decision as to whether or not you are willing to participate in this study. Your signature below indicates that you have read and understood the information provided, you have had all your questions answered in relation to the study, and have decided to participate in it of your own free will.

Who can I talk to about the study?

You may contact my supervisor on the following details:

Title	Dr
Initials	G
Surname	Pule
***Institutional Affiliation**	University of the Free State

Physical Address	
Academic Unit	School of Mathematics, Natural Sciences and Technology Education
Office Number	
Building	New Education Centre
Institution	University of the Free State
Street Name	205 Nelson Mandela Drive
City	Bloemfontein
Post Code	9300

Telephone no.	0639100127
Email address	PuleKG@ufs.ac.za

Do you understand this research study and are you willing to take part in it?

YES	NO

Has the researcher answered all your questions?

YES	NO

Do you understand that you can pull out of the study at any time?

YES	NO

_____

Name of learner

_____

Signature of learner

_____

Date

Researcher: Y. Bhagwonparsadh

Date: 2019/03/15

Information leaflet

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA
UFS UV

RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE

2019 03 15

TITLE OF THE RESEARCH PROJECT

The effects of condonation on the promotion of senior phase mathematics learners into the FET phase.

PRINCIPLE INVESTIGATOR / RESEARCHER(S) NAME(S) AND CONTACT NUMBER(S):

Yudvir Bhagwonparsadh Student number: 2017560745 Contact number: 083226824 924

FACULTY AND DEPARTMENT:

Name of Faculty: Education: Curriculum Studies

Name of Department: Education

STUDY LEADER(S) NAME AND CONTACT NUMBER:

Name of Study Leader (UFS staff member): Dr M Rabaza
Contact number: 083 4756 2011

TO THE PARENT/ GUARDIAN OF_____

OF_____ GRADE _____

WHAT ARE THE AIM / PURPOSE OF THE STUDY?

The purpose of the study is to investigate the effects of condonation on the promotion of Senior Phase Mathematics learners to the FET Phase.

WHO IS DOING THE RESEARCH?

I will be personally doing the research. I am based in SE Vawda Primary school and I am the Deputy Principal. The reason for me doing the research is, in my experience, learners are indiscriminately condoned in mathematics and then promoted into the Further Education and Training (FET) Phase. In 2016 during a Promotions Committee meeting, I raised the concern at district level that many learners lack the competency to take mathematics in the FET Phase. I have observed that there is a high failure rate of senior phase mathematics learners and these learners prefer to take mathematics literacy in the FET Phase. This has a negative impact on learners when they apply to study science subjects at higher education intuitions; hence the need for this study.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has not received approval from the Research Ethics Committee of UFS. Seeking consent from you is part of the ethical application. Once Ethical Approval is granted, I will present to you a copy as proof of approval.

Approval number: *N/A*

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

The research population of this study comprises the senior phase and FET phase learners as well as the mathematics and mathematics literacy teachers from a selected school in the Amajuba District in Newcastle. The focus group will consist of 6 learners. The reason for using a focus group is to collect rich data from the learners regarding their thoughts and experiences .The focus group will be able to provide rich data concerning the effects of condonation on their promotion into the FET phase.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

The participant's actual role in the study will be to answer questions. The study involves focus groups and un-structured interviews that will be audio recorded. The questions asked will be 1. How do condoned senior phase mathematics learners cope with mathematics in the FET Phase? 2. What are the experiences of teachers when teaching learners who were condoned in mathematics in the senior phase and are now in the FET Phase? 3. How does the condonation of senior phase mathematics learners affect their subject choices in the FET Phase? The expected duration of participation and the time needed to complete specific research activities (focus groups and interview) will be 2hours. The time allocated to conduct interviews and focus groups will be 1.30hrs. The possible risk to the children may experience emotions of a negative self-image due to be teased by other learners. Working with children is a given that they are a vulnerable group therefore all ethical consideration and protocols will be followed.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Participation is voluntary and that there is no penalty or loss of benefit for non-participation. Being in this study is voluntary and you are under no obligation to consent to participate. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

The findings are intended to add value to current and further research on the effects of condonation on the promotion of senior phase mathematics learners into the FET phase. The study will provide more information regarding the effectiveness of condonation. The study will also suggest ways in which teachers can improve on their implementation and consistency of condonation in mathematics. Participating teachers and the parents (of the learners participating in the study) will sign consent forms to obtain the necessary permission to conduct the research. The researcher will gain the cooperation of the participants. The use of pseudonyms and a coding system for the questions will ensure participants' confidentiality.

WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?

Participating learners will be removed from normal teaching in order to participate fully in the research. At the learners soonest, it is expected that learners will cover up with lost teaching time done in the class by the class teacher.

WILL WHAT I SAY BE KEPT CONFIDENTIAL?

The names of participants will not be recorded anywhere therefore no one will be able to link the participants to their answers. The use of pseudonyms and a coding system for the questionnaires will ensure participants' confidentiality and the participants will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. A transcriber and I will only have access to the data. The transcriber will sign a confidentiality agreement. The data may be made available to other people who have a vested interest in the study. I shall, based on my discretion make the data available only after a confidentiality agreement is signed. Participants will be informed that their anonymous data may be used for research report, journal articles and conference presentation. Participant's privacy will be protected in any publication of the information. Individual participants will not be identifiable in a report. While every effort will be made by me to ensure that participants will not be connected to the information that you share during the focus group, I cannot guarantee that other participants in the focus group will treat information confidentially. I shall, however, encourage all participants to do so. For this reason I will advise participants not to disclose personal and sensitive information in the focus group. Participants will be explained that they can refuse to take part even if their parents/gate-keepers have agreed to their participation. Participants may also leave the study at any time without any repercussions forth coming.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

Hard copies of your answers will be stored by the researcher for a period of five years and locked in the researcher's safe located in the researcher's residential address for future research or academic purposes. Electronic information will be stored on my password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After a period of five years all hard copies of the data will be shredded. All electronic data will be deleted. There is no possible inconvenience and/or discomfort to the participants because all precautions will be taken not to disclose their identities.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICPATING IN THIS STUDY?

There is no payment or reward offered, financial or otherwise to the participants.

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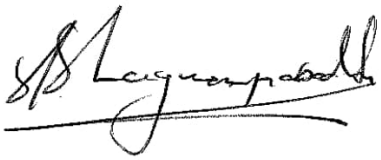
UFS UV

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?

If you would like to be informed of the final research findings, please contact Y.Bhagwonparsadh on 083 226 8924 or yudvirbhagwon@gmail.com. The findings are accessible for the year 2020 only. Should you have concerns about the way in which the research has been conducted, you may contact my supervisor Dr M Rabaza of the UFS on 084 4756 201 or rabazam@ufs.ac.za

Thank you for taking time to read this information sheet and for participating in this study.

Yours sincerely



Researcher: Y.Bhagwonparsadh

Date: 2019/03/15

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA
UFS UV

I, _____,

the parent / guardian of _____in grade ____,

- I hereby give free and informed consent to my child/ward to participate in the abovementioned research study.
- I understand what the study is about and why my child/ward is participating and what the risks and benefits are.
- I give the researcher permission to make use of the data gathered from my child/ward's participation, subject to the stipulations indicated in the above letter.

_____

Signature of the parent / guardian

Date: _____

Researcher: Y.Bhagwonparsadh

Date: 2019/03/15

Appendix G: Teachers

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA
UFS UV

INTERVIEW SCHEDULE: Teachers

1. In your experience with the Grade 10 learners, how did the learners' condonation in Grade 9 mathematics affect their academic performance in Grade 10?

2. The pass requirements for Grade 9 mathematics learners was adjusted to 20% and 30% respectively. Therefore, these learners did not meet the minimum requirement of 40% to pass however were condoned into Grade 10. Now they have "gaps in knowledge" because mathematics is hierarchal, how did you overcome this challenge?

3. What are some of the examples of academic support programmes that you had offered to condoned Grade 9 mathematics learners to improve on their performance levels in Grade 10.

4. How do you think learners will cope with mathematics/mathematical literacy in Grade 10 after been condoned in mathematics in Grade 9 and will undergo an academic support programme?

5. What is your opinion on condoning learners in mathematics in Grade 9 and then been promoted into Grade 10 without providing any form of a support programme?

6. How do you think that an academic support programme will improve on learner's mathematics/mathematical literacy performance in Grade 10, who were condoned in Grade 9 in the previous year?

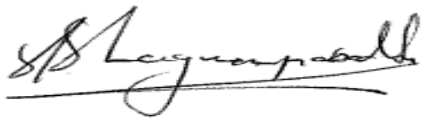
7. What should an academic support programme consist of, that will result in an improvement in their mathematics/ mathematical literacy in Grade 10 after been condoned in Grade 9 mathematics?

8. Discuss an academic support programme that you had offered and resulted in a positive/negative effect on learners' performance in Grade 10 mathematics / mathematical literacy.

9. Briefly explain how effective are the school-level structures on providing support to Grade 10 learners in order to improve on their performance levels.

10. What, in your view are the effects of condonation on learners who were promoted but not supported adequately as prescribed by policy?

11. Is there anything that you would like to share about the way Grade 10 learners are supported/not supported in mathematics/mathematical literacy in your school?



Researcher: Y. Bhagwonparsadh

Date: 2019/07/30

Appendix H: Learners

UNIVERSITY OF THE FREE STATE
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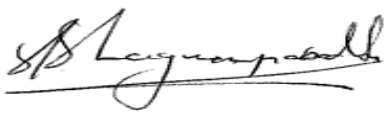
YUNIVESITHI YA FREISTATA
UFS UV

Focus Group (Learners)

1. Are you currently doing mathematics or mathematical literacy? Give me a reason for your choice of subject in Grade 10.
2. You had a low pass level in Grade 9. Has your pass level improved in Grade 10, if so, what helped you to improve your pass level?
3. What are some of the learning difficulties you had experienced in Grade 10 mathematics/ mathematical literacy as a result of you been condoned in mathematics in Grade 9?
4. How has these learning difficulties affected your levels of performance in mathematics / mathematical literacy in Grade 10?
5. What academic support programmes did your teacher implement to help you to improve on your performance levels into Grade 10?
6. Give examples of the kind of academic support you required from your school to improve on your performance in mathematics/ mathematical literacy in Grade 10.
7. What advice do you have for the current Grade 9 learners who are under performing mathematics and maybe condoned into Grade 10?
8. Is there any other experience you would like to share regarding the effects of condonation on your promotion into Grade 10 who were not academically supported?



Researcher: Y. Bhagwonparsadh

Date: 2019/07/30

Appendix I: Proof of title registration

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27 November 2018

APPLICATION FOR TITLE REGISTRATION

Applicant: Bhagwonparsadh, Y
Student Number: 2017560745
Discipline: Curriculum Studies
Study Code: Masters (EDCI8900)

Dear Prof Mosimege

Initial title: : "The effects of condonation on the promotion of Senior phase mathematics learners into the FET phase"

Registered title: "The effects of condonation on the promotion of senior phase mathematics learners into the FET phase"

Your application has been ACCEPTED with MINOR CORRECTIONS.

Please see attached documents for feedback.

All of the best to the student with the study.

Yours sincerely,

Prof M Mokhele Makgalwa
Chair: CTR committee

Ms CS Duvenhage
Secretary: CTR committee

Appendix J: Proof of language editing

PROOF OF EDITING

Dr. L. Hoffman, APEd (SATI), APRed (SAVI)

Kroonstad

BA, BA(Hons), MA, DLitt et Phil

Accredited Professional Text Editor – English and Afrikaans (South African Translators' Institute)

Member of the South African Translators' Institute

Cell no: 079 193 5256 Email: larizahoffman@gmail.com

DECLARATION

To whom it may concern

I hereby confirm that I have proofread and edited the following dissertation, including the references.

Title of dissertation

THE EFFECTS OF CONDONATION ON THE PROMOTION OF SENIOR PHASE MATHEMATICS LEARNERS INTO THE FET PHASE

Candidate

Yudvir Bhagwonparsadh

Lariza Hoffman
Kroonstad
7 July 2021